WHOLE OF SYRIA (WoS)
NUTRITION SECTOR
Strengthening Humanitarian response

Technical Rapid Response Team

REPORT ON THE KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) SURVEY INFANT AND YOUNG CHILD FEEDING (IYCF)

Aleppo, Idlib and Hama governorates, Syria

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LIST OF ACRONYMS

BMS	Breast Milk Substitutes
CBA	Child Bearing Age
CHW	Community Health Worker
ENA	Emergency Nutrition Assessment
FAO	Food and Agriculture Organization
FCS	Food Consumption Score
GAM	Global Acute Malnutrition
HRP	Humanitarian Response Plan
IDPs	Internally Displaced People
IYCF	Infant and Young Child Feeding
KAP	Knowledge, Attitude and Practice
MT	Metric Ton
OCHA	Office for the Coordination of Humanitarian Affairs
PLW	Pregnant and Lactating Women
rCSI	Reduced Coping Strategy Index
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SYP	Syrian Pound
Tech RRT	Technical Rapid Response Team
UNICEF	United Nations International Children's Emergency Fund
USD	United States Dollar
WFP	World Food Programme
WHO	World Health Organization
WoS	Whole of Syria

EXECUTIVE SUMMARY

Six years into the crisis, the humanitarian situation in Syria continues to deteriorate with 13.5 million people (48% male, 52% female) in need of humanitarian assistance, including 5.8 million children; with over 4 out of 5 persons living in poverty. As of November 2016, 4.8 million people have sought refuge in the neighbouring countries and beyond, 6.3 million people are internally displaced and 974,080 were besieged. 2016 has seen an increase in the number of people living in besieged areas by 147% compared to the previous year.

In Northern Syria, tensions and small-scale clashes continue to be reported from Idlib, Hama and Aleppo governorates. Despite ongoing insecurity, humanitarian organizations continue to respond to the needs of the affected population. This includes providing humanitarian assistance to the 36,000 IDPs from eastern Aleppo city and those arriving from Rural Damascus, as well as the responding to needs of the host community.

Food security situation in northern Syria remains dire. WFP's mobile Vulnerability Analysis and Mapping (mVAM) of January shows that overall in Syria, the main source of food for the surveyed households continued to be purchasing (78%), followed by labour (16%), own production (4%) and gift/assistance (2%). In accessible areas, 14% of the households declared food assistance as main food source.[1] As of January 2017, wholesale price of wheat grain increased by 52%, bulgur by 33% and white rice by 38% year-on-year. The wheat prices on local markets averaged USD 621.5/MT, which is four times higher than the price of wheat in the international market (USD 153.3/MT).[2]

As a result of the food insecurity, the nutrition situation has also been significantly affected in Syria. The WoS Nutrition sector estimated that 4.4 million boys and girls aged 6-59 months and Pregnant and Lactating Women (PLW) are in need of preventive and curative nutrition services in 2017. Of these, an estimated 75,000 children aged 6-59 months are acutely malnourished, 840,000 children suffer from micronutrient deficiencies, and the remainder require different kinds of preventative services to ensure adequate nutrition status and to prevent undernutrition. There are 1.5 million PLW requiring preventive and curative nutrition services against under-nutrition and for optimal nutrition well-being.

Infant and Young Child Feeding (IYCF) practices in Syria is considered to be very poor especially in relation to dangerously low exclusive breastfeeding and widespread use of infant formula even when not needed. In 2016, several local studies have been facilitated and conducted by NGOs working inside Syria. An assessment conducted by Physicians Across Continents in 11 refugee camps shows that more than 60% of mothers of infants under six months were actively requesting (seeking) infant formula at the time of the study, while 58% of infants less than six months were already using the product. Partners' anecdotal reports suggest that, in Aleppo alone, around 50% of infants less than six months are using infant formula, due to the continued untargeted distribution of infant formula by several local NGOs. In May 2016, based on an online review of current aid campaigns, there were at least 120 campaigns calling for donations of Breast Milk Substitutes (BMS).

In 2016, an IYCF in emergency (IYCF-E) operational strategy was developed for Syria as a first step to enhance the capacity of partners working in the country to address the challenges of infant feeding and improve how IYCF programs are delivered in the country. There was a need to get an updated understanding of the IYCF practice in Syria. The purpose of the Knowledge Attitude and Practices (KAP) survey was therefore to enhance an understanding of the contribution of poor childcare practices to malnutrition (both acute and chronic) and subsequently provide key recommendations for basic and effective responses.

Specifically the survey aimed at determining:

1. IYCF baseline indicators for children aged from 0 to 23 months;
2. Identify key IYCF practices that need to be further studied with a barrier analysis;
3. Collect information on maternal nutrition.

The survey area covers fully or partially three governorates where partners were already implementing, or where the nutrition cluster has planned to scale up, nutrition activities; Aleppo, Idlib and Hama. Data was collected in accessible sub-districts of Aleppo, Hama and Idlib governorate. The sampling methodology used was two-stage cluster sampling with 31 clusters in Aleppo and Idlib governorate. Sample size calculation used ENA for SMART to reach a reasonable,

[1] WFP, mVAM Bulletin 10, January 2017
[2] WFP, Market price watch bulletin Issue 26, January 2017

representative sample for the survey. The reason for using ENA was reached because of the following reasons; (1) The security context in the survey areas was unpredictable thus allowed a limited amount of time the survey teams could conduct the survey. (2) There was a need to ensure a quick assessment time and still ensure representability. (3) ENA for SMART provided realistic and representative samples compared to the traditional methods that resulted in very high sample sizes. 929 interviews of caregivers of children less than 2 were carried out, gathering data for 976 children less than two years of age.

SUMMARY FINDINGS

Key Indicators		Definition of Indicator	Numerator	Denominator	Results (95% CI)
Maternal Health	Delivery by skilled attendants	Proportion of birth attended by skilled health personnel– among children less than 6 months only	273	279	97.8% (95.3% - 99.3%)
Breastfeeding Initiation	Early initiation of breastfeeding	Proportion of children born in the last 24 months who were put to the breast within one hour of birth Living children only, not historic recall for deceased children	340	899	37.8% (34.6% - 41.0%)
	Colostrum rate	Proportion of lactating women who did not squeezed out the colostrum before initiating breastfeeding	239	263	90.9% (86.7% - 93.9%)
Exclusive and Continued Breastfeeding	Pre-lacteal feeding rate	Proportion of children 0–5 months of age who were fed with any liquid or food before initiating breastfeeding in the first three days after delivery	193	264	73.1% (67.4% - 78.4%)
	Exclusive breastfeeding under 6 months	Proportion of infants 0–5 months of age who are fed exclusively with breast milk	83	269	30.9% (25.3% - 36.8%)
	Continued breastfeeding at 1 year	Proportion of children 12–15 months of age who are fed breast milk	156	218	71.6% (65.1% - 77.5%)
	Continued breastfeeding at 2 years	Proportion of children 20–23 months of age who are fed breast milk	39	106	36.8% (27.4% - 47.2%)
	Children ever breastfed	Proportion of children born in the last 24 months who were ever breastfed	907	975	93.0% (91.3% - 94.6%)
	Age-appropriate breastfeeding	Proportion of children 0–23 months of age who are appropriately breastfed	480	878	54.7% (51.3% - 58.0%)
Non- Breastfed Children	Milk feeding frequency for non-breastfed children	Proportion of non-breastfed children 6–23 months of age who receive at least 2 milk feedings	157	254	61.8% (55.5% - 67.7%)
Bottle, Cup, Pacifier Use	Bottle-feeding	Proportion of children 0–23 months of age who are fed with a bottle.	326	971	33.6% (30.6% - 36.7%)
	Cup-feeding	Proportion of children 0–23 months of age who are fed with a cup.	601	966	62.2% (59.1% - 65.3%)
	Pacifier use rate	Proportion of children 0–23 months of age using pacifier.	293	976	30.0% (27.2% - 33.0%)
Complementary Feeding	Introduction of solid, semi-solid or soft foods	Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods	103	119	86.6% (79.0% - 92.4%)
	Minimum dietary diversity	Proportion of children 6–23 months of age who receive foods from 4 or more food groups	383	668	57.3% (53.4% - 61.1%)
	Minimum meal frequency	Proportion of breastfed and non-breastfed children 6–23 months of age, who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.	292	668	43.7% (40.0% - 47.6%)
	Minimum acceptable diet	Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk).	211	661	31.9% (28.4% / 35.5%)

KEY RECOMMENDATIONS:

To conduct a participatory dissemination workshop for the KAP findings to achieve buy- in and ownership of its findings and active involvement of key community influencers/change agents (religious, traditional and other local community leaders, NGOs, and CHWs), caregivers and their critical networks, in generating solutions for the challenges surfaced by the KAP survey .

The following are the specific recommendations agreed among the partners:

- Train, encourage and support capacity building of Health and Nutrition staff on quality IYCF counselling.
- Engage community health workers in the zones (where they exist) and pilot techniques like Trial of Improved Practices (TIPS) that involve counselling on recommended breast feeding practices, follow up visits to assess progress made, and confirm outcome of the trials.
- Increase the awareness of stakeholders at community level (key influencers; Sheikhs, grandmothers, fathers etc.) and build their capacities to promote appropriate knowledge and practices of infant and young child feeding.
- Strengthen the behaviour change communication in the IYCF programme through expanding the range of behaviour change strategies used, strengthen the social support behaviour change strategies, and tailor messages to the local contexts with a focus on visible improvements in health.
- Support events and advocacy initiatives like the IYCF.
- World Breastfeeding Week. Efforts should also be made to expand the scope to cover both rural and urban areas, liberated and besieged areas, and cross line and cross boarder operations.
- Scale up the use of micronutrient supplementation using sprinkles and link it to complementary feeding sensitization and counselling
- Engage stakeholders like the Rapid response mechanism partners is expected to yield better understanding of negative effects of breast milk substitutes hence reduced distribution.
- In line with the recommendations of the IYCF-E strategy advocate for the integration of IYCF with other sectors (e.g. Food Security and Livelihood, WASH, Protection)
- Conduct a barrier analysis to identify the reasons for the poor practices, like poor exclusive breastfeeding and poor minimum dietary diversity or minimum acceptable diet for children; and meal frequency for pregnant or/and lactating women, as well as to identify the determinants affecting those behaviours
- Expanding the scope of reach for BMS Standard Operating Procedures to ensure that there is a clarity of understanding and appreciation from key community stakeholders is recommended.

BACKGROUND

CONTEXT

Conflict History

Six years into the crisis, the humanitarian situation in Syria continues to deteriorate with 13.5 million people (48% male, 52% female) in need of humanitarian assistance, including 5.8 million children; with over 4 out of 5 persons living in poverty. As of November 2016, 4.8 million people have sought refuge in the neighbouring countries and beyond, 6.3 million people are internally displaced and 974,080 were besieged. In 2016, there was a 147% increase in the number of besieged civilians in 2016.[3]

In Northern Syria, tensions and small-scale clashes continue to be reported from Idlib, Hama and Aleppo governorates. Despite ongoing insecurity, humanitarian organizations continue to respond to the needs of the affected population. This includes providing humanitarian assistance to the 36,000 IDPs from eastern Aleppo city and those arriving from Rural Damascus, as well as the responding to needs of the host community. The 36,000 IDPs who were evacuated from eastern Aleppo city in December 2016, have been integrated into the regular programming of organizations in the western countryside of Aleppo and Idlib Governorate.[4] From February 1st to March 7th 2017, there were 652,929 displacements recorded by the Camp Coordination and Camp Management Cluster from affected areas of northern Syria, including Aleppo (436,076), Hama (95,584), Idlib (77,944).[5] In average of 6,150 people displace each day in 2016.[6] In 2017, with no end to hostilities in sight, humanitarian needs are expected to continue to grow in scale, severity, and complexity.

Description of the survey area

The survey area covers fully or partially three governorates where partners were already implementing, or where the nutrition cluster has planned to scale up, nutrition activities; Aleppo, Idlib and Hama. The sub-districts included in the survey area are indicated on the map in figure 1.

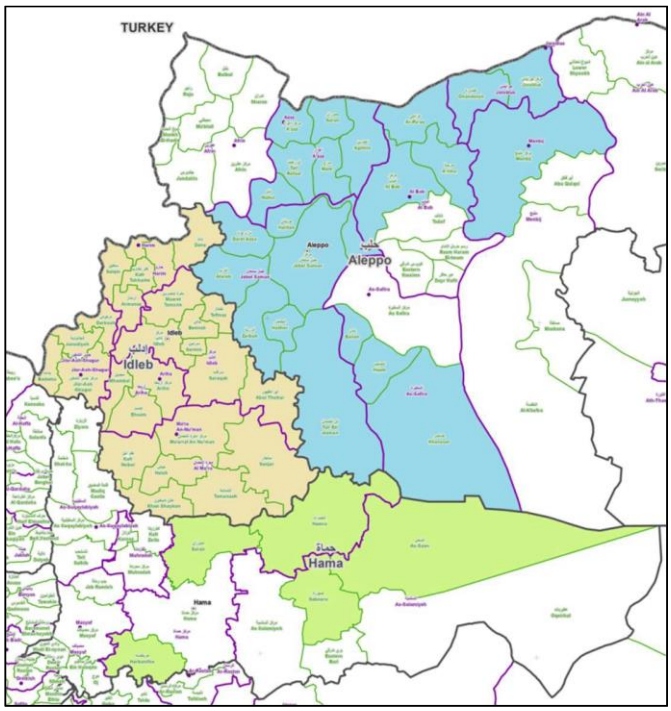


Figure 1: Map of Aleppo, Hama and Idlib governorates with sub-district in survey area highlighted.

The list of accessible communities was created following the list of accessible area, provided by OCHA as of January 26th 2017 (Annexe 1), and the confirmation from the nutrition cluster. All communities and camps identified as non-accessible in one of these three governorates were removed from the survey area. The total number of communities included in the survey area is 937, and 316 camps, which encompass nearly 2.7 million people.[4] The services and humanitarian assistance to the population included in the survey areas vary depending on the security situation. The Annexe 2 shows the number of cluster who had reached a sub-district in December 2016. The evolution of the coverage reached by cluster partners can be found in the humanitarian response website[7].

[3] OCHA, Syria's suffering in numbers, December 2016
[4] OCHA, Idlib Governorate and Western Countryside of Aleppo, Contextual update February 2017
[5] UNHCR, Syria: Flash update on recent events, 15 March 2017
[6] 2017 Humanitarian Needs Overview (HNO): Syrian Arab Republic, December 2016
[7] https://www.humanitarianresponse.info/fr/operations/whole-of-syria/infographic/whole-syria-sectors-reach-interactive-presentation-jan-2015-6

Food security context

WFP's mobile Vulnerability Analysis and Mapping (mVAM) of January shows that overall in Syria, the main source of food for the surveyed households continued to be purchasing (78%), followed by labour (16%), own production (4%) and gift/assistance (2%). In accessible areas, 14% of the households declared food assistance as main food source.[8]

The area planted with cereals in the 2015-2016 cropping season is the smallest on record, 40% less hectares were planted compare to before the crisis. The wheat production was 55 percent less compare to pre-conflict. Agricultural production continued to be hampered by insecurity that constrained access to fields; damaged infrastructures and machinery; and expensive and insufficiently available inputs.[9]

In January 2017, the national average cost of a standard food basket[10] was SYP 36,025, a decrease of seven percent compared to December 2016. The cost remains 44 percent higher than in January 2016. In the survey area, the cost is below the national average, SYP 32,532 in Hama, SYP 34,338 in Idlib and SYP 30,799 n Aleppo governorate, higher by 9% in average compared to six months ago. Humanitarian access to the formerly besieged eastern Aleppo city contributed to an 84% decrease in food basket costs compared to December. As of January 2017, wholesale price of wheat grain increased by 52%, bulgur by 33% and white rice by 38% year-on-year. The wheat prices on local markets averaged USD 621.5/MT, which is four times higher than the price of wheat in the international market (USD 153.3/MT).[11]

The survey shows there was an overall decrease from December in the proportion of IDPs and residents with inadequate food consumption: from 57 to 50%, and from 38 to 32%. However, the prevalence of poor food consumption (Food consumption scores (FCS) <28)) among IDPs rose from 8 to 13%in January. The survey shows that the FCS fell from 50.3 to 46% in Aleppo city and from 54 to 50.8% in accessible areas compared with December, but is still above the acceptable level (FCS>42). This deterioration could be attributed to the lean season and increased lengthy power outages impacting economy. In addition, the increased influx of IDPs who are seeking refuge in relatively stable areas is believed to be putting more pressure on the poor host communities in accessible areas, whose resources are already stretched.

The use of negative coping strategies remained the highest among displaced households during January. From December to January, the mean reduced Coping Strategies Index (rCSI)[12] for IDPs has fallen, from 24.7 to 18.8% and from 15.2 to 12.7% for residents, while increasing from 11.1 to 17.8% for returnees. The different negative coping strategies were among others, restricting adult consumption so that children could eat (49%), borrowing food (57%) and reducing the number of meals (68%).[6]

Nutrition context

In 2015, the Health and Nutrition Clusters agreed that the Humanitarian Pool Fund funding call would require all applicants to include IYCF related interventions. This was aligned with the support to shift the focus from curative to preventative nutrition interventions, and address aggressive and uncontrolled distribution of BMS in the affected areas. A focus was made on IYCF training of frontline staff and NGO. With the help of the IYCF and Advocacy Technical Working Group, an IYCF–E operational strategy, a guidance for the donation and management of the BMS programme, as well as set of standardise IYCF recording and reporting tools, a nutrition advocacy strategy were developed.

In 2016, several local studies have been facilitated and conducted by NGOs working inside Syria. An assessment conducted by Physicians Across Continents in 11 refugee camps shows that more than 60% of mothers of infants under six months were actively requesting (seeking) infant formula at the time of the study, while 58% of infants less than six months were already using the product. Partners' anecdotal reports suggest that, in Aleppo alone around 50% of infants

[8] WFP, mVAM Bulletin 10, January 2017
[9] FAO/WFP Crop and food security assessment mission to the Syrian Arab Republic, November 2016
[10] The cost of a standard basket of dry goods providing 1,930 kcal a day for a family of five during a month. The basket includes 37 kilograms (kg) of bread, 19 kg rice, 19 kg lentils, 5 kg of sugar, and 7 kg of vegetable oil.
[11] WFP, Market price watch bulletin Issue 26, January 2017
[12] The maximum reduced Coping Strategies Index is 56

less than six months are using infant formula due to the continued, random distribution of the product by the several local NGOs who provide the product without following any criteria. In May 2016, based on an online review of current aid campaigns, there were at least 120 campaigns calling for donations of BMS.

At the community, health facility and camp level, NGOs reported that they have been able to support basic IYCF message dissemination, and in some instances, even counselling and groups educations with mothers of children less than two years of age. There has been a general common approach by the different NGOs in the way IYCF has been implemented. Few NGOs supported the interventions at the camps level, with the establishment of Mother Baby Area manned by trained Community Health Workers (CHWs). There were several NGOs who reported that BMS distribution to children in need was a component IYCF programme. The NGOs shared a similar set of criteria, for the identification of the children to be supported by the programme. All NGOs complained that the continued and persistent random distribution of the BMS by other NGOs, with no criteria and IYCF support system, was creating serious challenges to their own programme and was jeopardising the impact of the IYCF interventions.

In 2016, the Whole of Syria (WoS) Nutrition partners have reached 1.9 million people (figure 2). The Nutrition cluster Turkey Hub partners mostly carry on nutrition activities in Idlib and Aleppo governorate. In 2016, UNICEF reached over 350,000 children and mothers in Hard-to-Reach and besieged locations with therapeutic nutrition supplies, complementary food, and micronutrient supplements through crossline convoys and airdrops. Over 936,000 children and over 182,000 pregnant and lactating women (PLW) were screened for malnutrition, of whom close to 19,000 children and 1,400 women received treatment. Over 658,000 PLW were counselled on proper breastfeeding and complementary feeding and over 461,000 children and 140,000 mothers received multiple micronutrient supplements.[13]

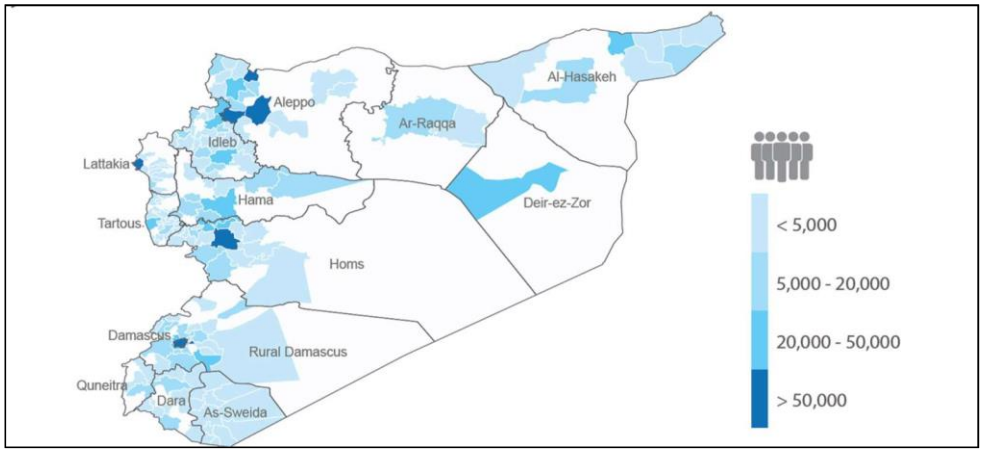


Figure 2: Number of people reached by nutrition activities by sub-district from January to December 2016

The 2017 Humanitarian Response Plan[14] (HRP) includes the framework within which the WoS Nutrition sector will respond in Syria throughout 2017. The nutrition situation in the 2017 HRP is as follow:

Acute and chronic malnutrition levels among boys and girls under five are found to be within acceptable levels, with Global Acute Malnutrition (GAM) at 3 per cent and chronic malnutrition (stunting) at 12.7 per cent. Poor levels of GAM were however recorded at 7.8 per cent among women of child-bearing age (CBA), much higher than the under-five GAM levels according to the SMART conducted in 11 out of the 14 governorates in 2015/16 43.

Anaemia prevalence indicates a moderate public health problem among both girls and boys under five and CBA women, with a prevalence of 25.9 per cent and 24.5 per cent respectively. This result alerted nutrition humanitarian partners to the possibility of other micro-nutrient deficiencies beyond anaemia among both children and women. Despite the acceptable levels of acute malnutrition reported, many aggravating factors prevail, including sub-optimum Infant and

[13] Whole of Syria - Nutrition Facts and Figures - January - December 2016, UNICEF, February 2017
[14] Whole of Syria Strategic Steering Group, 2017 Humanitarian Response Plan, March 2017

Young Child Feeding (IYCF) practices, food insecurity, deteriorating livelihood options, population displacement contributing to diarrhoea and other childhood diseases. These additional elements can negatively affect the nutrition situation, especially in the context of worsening healthcare and service coverage, particularly in UN-declared besieged and hard-to-reach locations, where humanitarian nutrition partners are forecasting more under-nutrition cases.

The WoS Nutrition sector estimated that 4.4 million boys and girls aged 6-59 months and Pregnant and Lactating Women (PLW) are in need of preventive and curative nutrition services in 2017. Of these, an estimated 75,000 children aged 6-59 months are acutely malnourished, 840,000 children suffer from micro-nutrient deficiencies, and the remainder require different kinds of preventative services to ensure adequate nutrition status and to prevent undernutrition. There are 1.5 million PLW requiring preventive and curative nutrition services against under-nutrition and for optimal nutrition well-being.

One of the priorities for the WoS Nutrition Sector is to strengthen humanitarian life-saving preventive nutrition services for vulnerable population groups focusing on appropriate IYCF practices in emergency, micronutrient interventions and optimal maternal nutrition. This objective included a target of 900,000 counselling and awareness raising on IYCF-E and optimal maternal nutrition at facility and community level in 2017.

SURVEY OBJECTIVES

MAIN OBJECTIVE:

The purpose of the Knowledge attitude and practices survey was to enhance an understanding of the contribution of poor childcare practices to malnutrition (both acute and chronic) and subsequently provide key recommendations for simple and effective responses.

SPECIFIC OBJECTIVES:

- To determine IYCF baseline indicators for children aged 0 to 23 months, and collect additional information on maternal nutrition.
- To establish IYCF baseline indicators for children aged from 0 to 23 months;
- To identify key IYCF practices that need to be further studied with a barrier analysis;
- To collect information on maternal nutrition.

METHODOLOGY

SAMPLING METHOD

Sample size

Children from 0-23 month, hereafter referred to as ‘child’, was classed as the primary sampling unit. Due to the absence of recent IYCF survey implemented, only three indicators have been used to determine the sampling size. The age range of continued breastfeeding at 2 years (20-23 months) is very narrow; many children of that age will be needed before having confidence in the results. The IYCF core indicators to calculate the sampling size are therefore: Early initiation of breastfeeding; Exclusive breastfeeding under 6 months. The 2006-10 IYCF indictors prevalence’s have been used (table 2).

Table 1: Expected IYCF indicator’s prevalence, UNICEF state of the world children data reflecting 2006-10

Indicator	Estimated prevalence (UNICEF 2006-10)
Early initiation of breastfeeding	46%
Exclusive breastfeeding under 6 months	43%
Continued breastfeeding at 2 year	23%

The Emergency Nutrition Assessment (ENA) software was used to calculate the sampling size. A desired precision of 6 % has been chosen as a sufficient level of precision to make IYCF programmatic decisions. The sampling design proposed is a two-stage cluster sampling; the design effect applied was 1.5. The largest sampling size required is using the prevalence of early initiation of breastfeeding with 433 children 0-23 months.

Sampling Methodology

The sampling methodology selected is two-stage cluster sampling. The 31 clusters and 4 reserved clusters were selected following the probability proportionate to size sampling using ENA software. For the cluster selection, the primary sampling unit was communities and camps. Each communities and camps in the sub-districts that was identified as accessible by the nutrition cluster was included for the assignment of the cluster. There was no cluster selected in Hama governorate.

The number of household to be selected per cluster was chosen following 5.6 as average household size, 7.79% of children under 2 from total population and 90% individual response rate. Sample households were selected using systematic random sampling.

Individual selection and field case scenario

All living children aged from 0 to 23 months old has been part of the sample for this assessment. When birth certification or vaccination card was not available, children age were assessed using local events calendar prepared with the local community.

No children were excluded from the survey unless he/she had reached 24 months on the day of the interview. Each primary caretaker has been interviewed by the enumerators in order to collect data on IYCF and other topics:

- When the child is absent, the existence of the child will be confirmed by the family as well as his/her age and the interview will be carried out with the mother.
- In case the mother is not living with the child anymore, the primary caretaker (father, sister, grandmother, aunty, etc.) will be selected as the respondent. If no caretaker was present, the team will return to the house later during the day.
- In case of refusal from the parents to perform the interview an identifying number will be given to the child.
- When a house is empty and neighbours confirmed that the family slept in the house the previous night and would come back (house not abandoned), the team will return there at the end of the day. If it was not possible to return at the end of the day or when people were still absent at the second visit, it will be recorded as absent. The household will be included in the survey and the number to be reached in the cluster.
- If in camp setting, recent movement of population from one house to another occurred between the listing and the day of the interview, if a family moved within the intervention area, the children less than two will still be part of the survey and the mother or primary caretaker will be interviewed. If the family moved out from the intervention area, the child will not be considered as part of the sample.

Questionnaire

The survey questionnaire is included in Annexe 3, it includes five modules:

- Primary caregiver information
- Module A - Caregivers of children 0 – 23 months: A1, Breastfeeding Knowledge & Attitude
- Module B - 0 – 6 months: B1: Breastfeeding initiation, B2:Exclusive breastfeeding, B3: Artificial feeding, B4: bottles, cups and pacifiers
- Module C: 6 – 23 months: C1: Breastfeeding initiation, C2: Continued breastfeeding, C3:Complementary feeding, C4: Artificial feeding, C5: bottles, cups and pacifiers
- Module D: Caregivers of children 0 – 23 months, aged between 15-49 years

The questionnaire has been translated into Arabic, back translated and pre-tested during the training to improve quality of the data collection. Informal verbal consent from the respondents has been obtained after explaining the purpose of the study.

Some knowledge and attitude questions were asked only once to avoid duplication and survey fatigue, in case of more than one child within one household. This KAP survey covered both households with children under two currently living in camps and communities. The results will be presented disaggregated per camp or communities only when significantly different.

Training

Seven partners covered the area for the implementation of the KAP survey: Hand in Hand for Syria, Human Appeal International, Independent Doctors Association, International Medical Corps, and Physicians across Continents, Qatar Red Crescent and Syria relief.

A total of 84 enumerators and 16 supervisors from the seven organizations were identified for the KAP survey. The enumerators had varying levels of experience, most were CHW. Four training sessions were scheduled, three in Idlib and one in Aleppo governorate. The trainings in Idlib were led remotely, with one person in the field in charge of leading and helping to facilitate the training. All training material and survey tools were translated in Arabic. Training for the KAP survey occurred over three days for three sessions and two days for one, and consisted of both theoretical and practical components.

Topics covered by the training included:

- IYCF-E: An Introduction
- KAP Survey Overview
- Questionnaire Administration
- KOBO Collect
- Introduction to the KAP tool
- Pilot test the KAP tool
- Sampling Size and Methodology

Data Collection and supervision

Data collection took place from 24th March to 31st May 2017 in camps and communities of Aleppo and Idlib governorates; 929 interviews of caregiver of children under two were conducted, gathering data for 976 children less than two. This higher sample size decrease the desired precision to 4%.

A team of six enumerators were covering one cluster, supervised by one supervisor in the field and remotely by the focal point of the organization, and if needed the Tech RRT IYCF adviser, based in Turkey. The KAP survey supervisors followed each team to ensure compliance of sampling methodology and good quality of questionnaire administration. The Tech RRT IYCF adviser checked questionnaires daily, clarifying any issues with the partners' focal point to share with the supervisors and enumerators.

Data Entry and Analysis

Digital data collection was used for the KAP survey with KOBO Collect; allowing decreasing data entry or filtering mistakes and applying range check or marking question as compulsory. All questionnaires were filled during the interview and shared by the end of the day. The Tech RRT IYCF adviser conducted data cleaning.

EPI Info 7.2. Program was used for analysis. The Tech RRT IYCF adviser conducted data analysis and report writing. Data was disaggregated by sex and age whenever possible and chi-squared tests were conducted to explore statistical linkages between parameters and across years.

All IYCF indicators used were following the WHO Indicators for assessing IYCF practices.[15] The denominator and numerator of the indicator early initiation of breastfeeding include only living children who were born within the past 24 months; historic recall did not include deceased children.

Constraint

As seven partners took part of the KAP survey, there were many different teams and therefore many enumerators. Some team was only covering one cluster; this did not allow teams to improve their capacity with practical experience every day and therefore increase the data quality over time.

Most of the training sessions have been lead remotely with one staff helping the facilitation on site. This can affect the quality of the training sessions and interaction between the trainer and trainees. To identify the trainers in Turkey has also been challenging as their availability and possibility to access Syria have changed from initial plan.

Newly displaced IDPs can be harder to reach via systematic sampling methodology as their dwellings are often in flux or not fully established. The questionnaire does not include a question on the status of the caregiver (IDP or from host community). It is a possibility that IDPs may not be correctly represented.

[15] Indicators for assessing infant and young child feeding practices: conclusions of a consensus meeting held 6–8 November 2007 in Washington D.C., USA.

RESULTS

SAMPLE CHARACTERISTICS

Out of the 943 households with children less than two years old sampled in Aleppo and Idlib districts, 14 primary caregivers did not accepted to participate to the survey. This leads to a non-response rate of 1.5%.

976 children under the age of two were included in the study: 480 (49.2%) female and 497 (50.8%) male. The sex ratio of 1.03 is within normal range. The median age of the children under two was 11 months, ranging from 0 to 23 months. The repartition of the children by age group is presented in table 3.

Table 2: Age and sex distribution of children under two surveyed

Age Range (months)	Female	Male	Total N=(%)
0 - 5	129	150	279 (28.6)
6 - 11	116	106	222 (22.7)
12 -23	235	2340	475 (48.7)
Grand Total	480 (49.2)	496 (50.8)	976 (100)

Out of the 929 primary caregivers identified, the majority of the primary caregivers were mothers: 877 (94.4%), of which 150 (17.1%) were pregnant. The repartition of the primary caregivers per age group is presented in table 4. Their age vary from 15 to 83 years. The median age of the primary caregivers was 25 years, and the mean 27 years.

Table 3: Age and distribution by type of primary caregivers surveyed (excluding two mothers with age mistaken)

Age Range (years)	Mother	Father	Sister	Aunt	Grand-Mother	Uncle	> 1 link	Total N= (%)
15 - 17	62	0	1	1	0	0	0	64 (6.9)
18 - 25	394	11	1	2	0	1	2	411 (44.3)
26 - 35	331	7	2	5	0	0	0	345 (37.2)
36 - 50	86	3	0	2	6	0	0	97 (10.5)
51 - 83	2	0	0	0	8	0	0	10 (1.1)
Grand Total	875 (94.4)	21 (2.3)	4 (0.4)	10 (1.1)	14 (1.5)	1 (0.1)	2 (0.2)	927 (100)

The duration of stay in the camp or community, where the primary caregiver was surveyed has been reported and is presented in figure 3. As expected, the majority of the caregivers who have stayed in their current location for more than 10 years live in a non-camp setting. The majority of the caregivers (52.0%) in camps have lived there between one to three years. The percentage of caregivers having spent less than a year in the camps they are currently living (29.0%) is slightly higher than for the caregiver living in a non-camp setting.

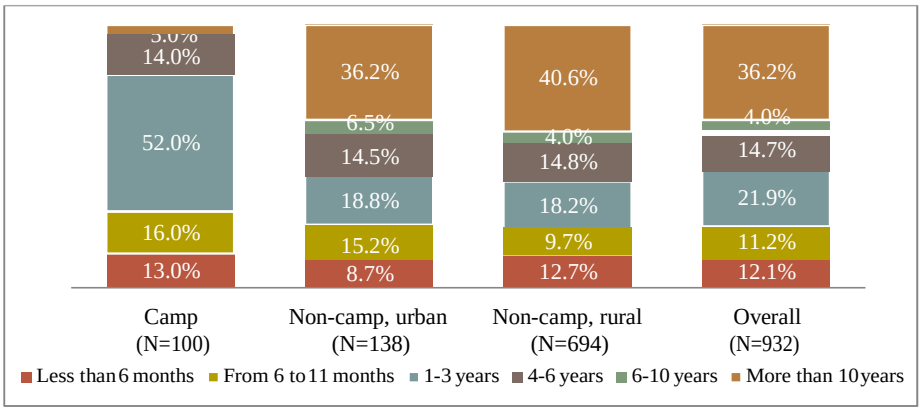


Figure 3: Duration of stay in current camp or community (N = 932)

INFANT AND YOUNG CHILD FEEDING

Breastfeeding practices

Caregiver knowledge of six breastfeeding principles was surveyed: three questions were asked to primary caregivers of children less than 6 months (N=263) and three others question were asked to all primary caregiver of children less than 23 months (N=877). The majority of the mothers managed to give at least two correct answers out of the three questions on breastfeeding asked. The mothers who were asked the six questions were 43.0% to give half of the correct answers. The details of knowledge for mothers are shown in figure 4.

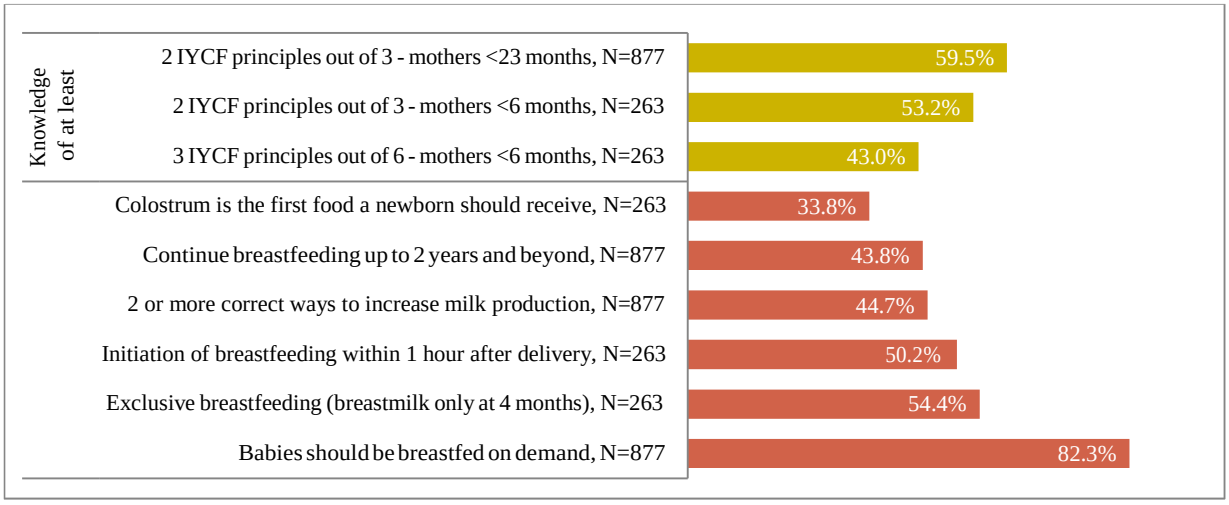


Figure 4: Mothers who answered correctly to six breastfeeding principles

As mentioned in figure 4, the first food or liquid that most mothers mentioned a new-born should receive is colostrum, 33.8% mother cited colostrum alone and 53.6% cited colostrum alone or with an additional liquid. The second most cited liquid was water with sugar; for 21.7% mothers it should be given alone, in total 47.2% reported it should be given either alone or with an additional liquid, in majority colostrum. The third liquid is anise, cited by 22.4%. It is named in majority with another liquid, predominantly water with sugar. There was no significant difference for other primary caregivers. The other liquids cited were breast milk (9.5%), infant formula or plain water (1.5% each), fruit juice or traditional medicine (1.1% each) and animal milk or dates (0.4% each). (N=263)

Most of the mothers know that breastfeeding should start immediately or within the first hour after delivery (50.2%). Almost 40% of the mothers reported that a child should be breastfed within the first day (from 1 to 23 hours) (38.0%), 8.8% more than one day and 2.3% when the baby is ready. (N=263) Other caregivers only reported that breastfeeding should start immediately (33.3%); and the majority mentioned within the first day (67.7%, N=12), they were more likely to report that than mothers ($p<0.05$).

Asked what is the food or drink a four months old baby should be given, 54.4% of mothers replied breast milk only. The others replied: breast milk & solid/semi-solid foods (20.0%), breast milk & formula milk (17.6%), formula milk only (3.2%) and chamomile (0.8%). (N=250)

Most of the mothers responded that babies should be breastfed on demand (82.3%), while 9.8% responded according to a schedule and 6.5% whenever the mother wants. (N=877) The other types of caregivers mentioned mainly that the child should be breastfed on demand (65.4%) and according to a schedule (23.1%). (N=52) The mothers were more likely to say a child should be breastfed on demand ($p<0.05$) and the other primary caregivers were more likely to say the child be breastfed according to a schedule ($p=0.05$)

The main knowledge on how to increase breast milk production are shown in figure 5. The main answers were related to the diet of the mother: eating specific food (43.7%), eating well (36.5%) and drink enough liquids (18.8%); as well as breastfeeding often (19.3%).

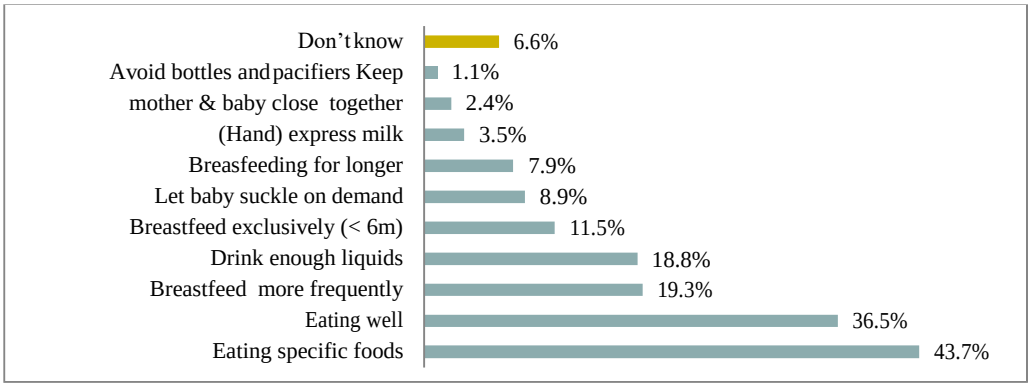


Figure 5: Different ways to increase milk production reported by mothers of children less than two years old (N=877)

Almost half, 43.8% of the mothers mentioned that breastfeeding is recommended to stop after 23 months; the median answer is 18 months. The main other answers given by mothers were at 12 months (11.5%) and at 18 months (20.3%). (N=877)

If a mother has difficulties with breastfeeding, 47.9% of mothers of children less than two years old replied that their mothers or mother-in-law can help to solve the problem; while the main others persons they can reach for support cited were: doctor (29.9%), other family member (15.1%), midwife (11.9%), CHW or social worker (11.3%) or friend (7.8%). The traditional birth attendant was cited by only 3.6% of the mothers in majority living in non-camp setting. Mother living in non-camp setting urban were more likely to report that they can get support about breastfeeding difficulties by CHW or social worker compare to mother living in non-camp setting rural ($p<0.01$).

Among the 859 mothers who have breastfed their child less than 2 years the day before the survey or in the past, 96.5% reported not feeling comfortable breastfeeding in front of unrelated men, 92.2% in front of extended family members and 90.1% in front of unrelated women. Among the mothers who reported having breastfed their child the day or night prior the survey (N=635), 24.9% reported difficulties with breastfeeding during that period. Mothers of children less than 3 months are more likely to reported having breastfeeding difficulties than mother of children from 3 to 6 months ($p<0.05$). The difficulty the most frequently cited was: not enough milk supply (39.2%). Mothers who did not mention having this difficulty were more likely to breastfeed exclusively their child less than 6 months ($p=0.01$). The other difficulties were: breast condition (36.1%), breastfeeding is painful (24.7%), mother or child is sick (17.1%), baby not able to suckle (8.2%), poor quality of milk (4.4%). Other difficulties related to the condition of the mother were: tired (5.7%), not eating well (5.1%) stressed (2.5%) or busy (1.9%).

The reasons beyond the feeling of not having enough milk are listed in figure 6.

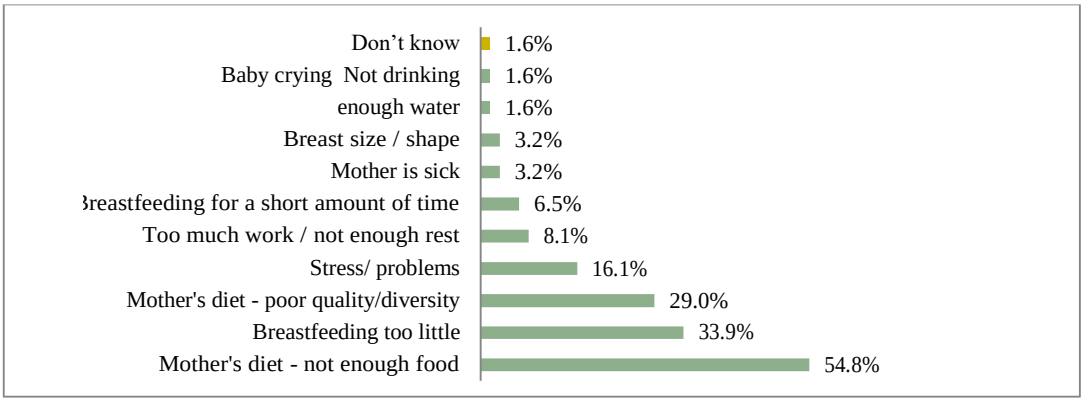


Figure 6: Breastfeeding mother's reasons beyond the feeling of not having enough milk (N=62)

Knowledge of timely initiation of complementary feeding at 6 month (28.5%) is slightly lower than knowledge of the other IYCF principles. The median of the time for initiation of complementary feeding is 6 months, and vary from 2 to 24 months. The initiation should start before 6 months for 28.0%, from 7 to 12 months for 39.7% and older than 12 months for 3.8%.

The majority of the caregiver (80.9%) mentioned that exclusive breastfeeding up to 6 months would have positive consequence on the health of their child. For those who disagree, the main reason was that breast milk alone is not enough (figure 7). Caregivers of children less than 6 months mentioning that exclusive breastfeeding was very good for the health of their child were more likely to exclusive breastfeed them ($p<0.05$).

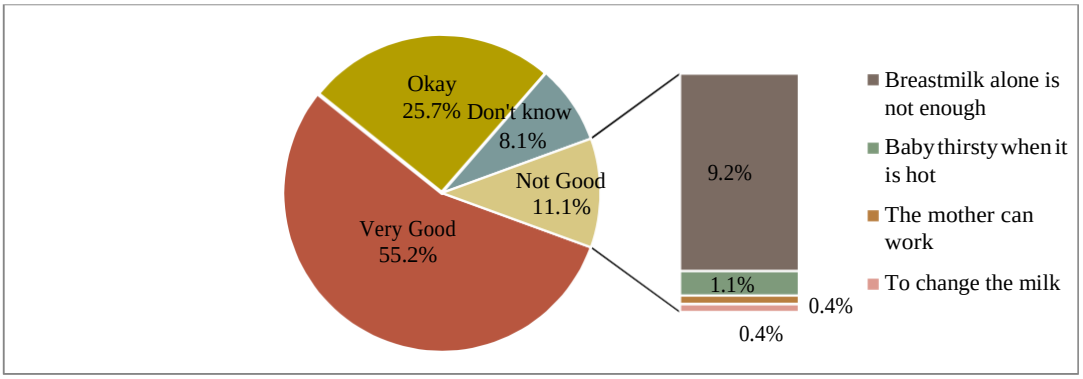


Figure 7: Perceived health benefit of exclusive breastfeeding and reasons of answering "not good" (N=261)

The majority of caregivers mentioned that the child will become sick if not exclusively breastfed (42.2%) and close to one third mentioned that nothing will happen (29.9%). The others consequences of not exclusively breastfeeding a child cited were: will not gain weight (28.4%), will be hungry (19.5%) and will get diarrhoea (13.8%).

More than half of the children (52.3%) were delivered at a NGO health facility. The figure 8 shows where the children were born, the others (0.6%) were doctor (n=3), midwife (n=2) and hospital (n=1); answers that could not be included in the different propositions. There is no significant difference on exclusive or early initiation breastfeeding practice depending on the location of birth.

For children less than 6 months, the delivery at home was supported by midwives (77.8%), traditional birth attendant and family member (11.1% each). (N=27) A total 97.8% of births of children less than 6 months were attended by skilled health personnel at home or at a health facility.

Out of the all mother who delivered at the health facility, more than one out of four (26.6%) delivered with a Caesarean section. (N=252) Mothers who gave birth by vaginal delivery were more likely to initiate breastfeeding within the first hour as per the recommendation compare to mothers who delivered with a Caesarean section. 17.9% (N=67) vs 39.5% (N=185), (p<0.01).

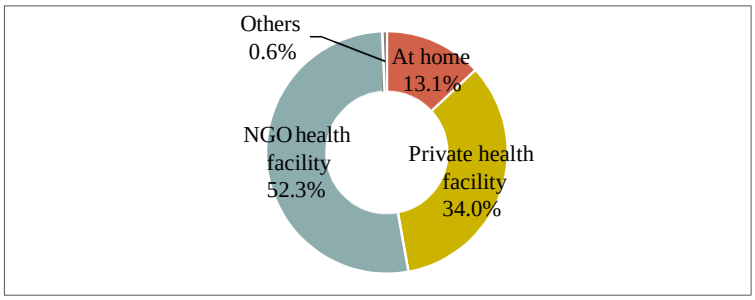


Figure 8: Birth location of children less than 23 months (N=976)

After birth, 26.5% of the children less than 6 months were put on the skin directly; the others were not put on the skin immediately (70.6%) or the caregivers did not recall (2.9%). (N=279)

The majority of children less than 6 months were bathed after 6 hour (54.1%). Most of those children were bathed after more than 24 hours (32.6%). The other were bathed immediately (19.0%), from 1 hour to 6 hours (25.8%), from 7 to 24 hours (21.5%). (N=279) Mothers who delivered at a health facility were more likely to delay the bath for up to 6 hours than the mother who delivered at home: 25.9% (N=27) vs 57.1% (N=252), (p<0.01).

The early initiation of breastfeeding is 37.5%, the majority started breastfeeding within the first day (46.0%), 15.7% started after more than 24 hours. (N=907) Children female were significantly more likely to be breastfed within one hour after delivery (p<0.05).

Most of the mother did not squeezed out the colostrum, only 24caregivers did (9.1%). (N=265) The main reasons why are listed in figure 9.

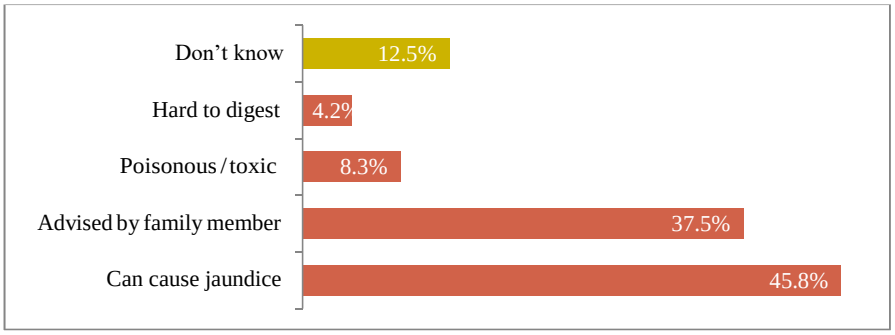


Figure 9: Reasons for squeezing out the colostrum (N=24)

In the first three days after delivery 72.83%, caregivers reported having given something to drink to the child mixed with breast milk. (N=265) Among those caregivers and caregivers who never breastfed their child, the main drinks given in the first three days after delivery were: sugar water (73.9%), Anise (47.8%), infant formula (5.8%), plain water (3.4%), milk or prescribed medicines (2.4% each). The figure 10 shows the time of initiation of breastfeeding for different feeding category during the first three days after delivery.

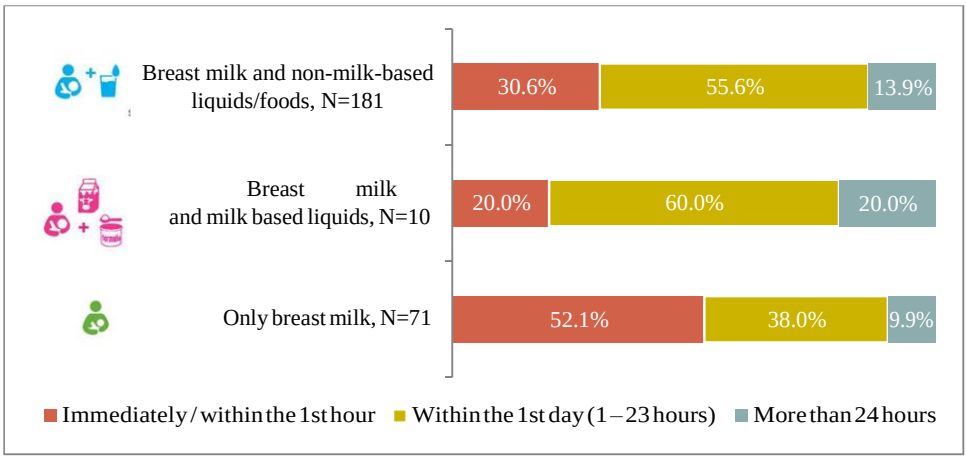


Figure 10: Percent of infants put to the breast at <1 hour, 1–23 hours and >24 hours after birth, by feeding type during the first three days after delivery

Overall, 92.9% of children were breastfed in the past, 7.0% were never breastfed. 25.1% caregivers mentioned that the child breastfed in the past did not breastfed yesterday. The main reasons for not breastfeeding the day before the survey are listed in figure 11. The main reason is the pregnancy of the mother; mothers who were not pregnant were more likely to breastfeed their child the day or night before the survey compare to pregnant mothers: 51.1% (N=139) vs 79.3% (N=686), ($p<0.01$).

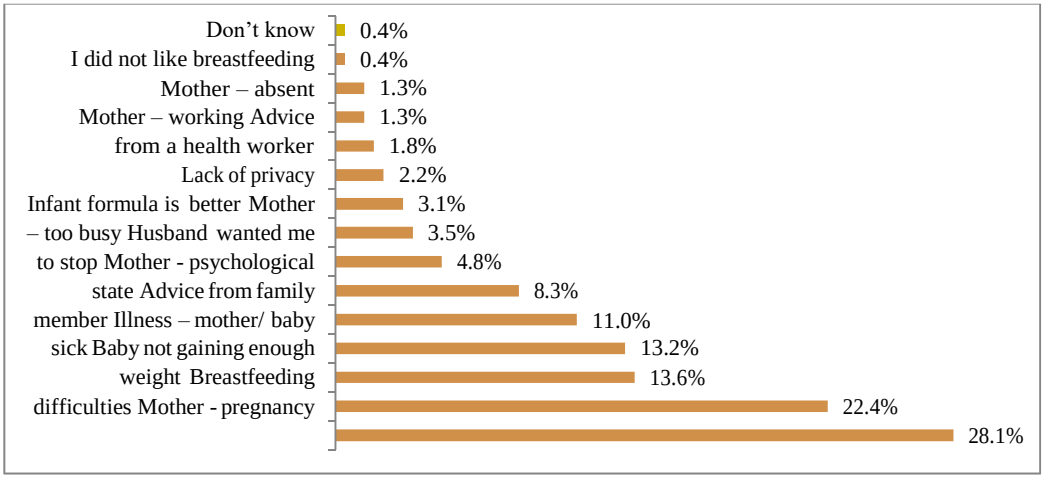


Figure 11: Reasons the child was not breastfed the day or night before the survey while breastfed in the past (N=228)

Instead of receiving breast milk, the child not breastfed the day before the survey were majority given animal milk (42.1%), followed by infant formula (29.9%), water (28.4%) and nothing (19.5%). Less than half of children less than 6 months were exclusively breastfed (30.9%) but the majority were still breastfed at one year (71.6%) and 36.8% at two years (table 4). Around half of the children 0 to 23 months were age-appropriately breastfed (54.7%).

Table 4: Maternal Health and breastfeeding practices

Key Indicators		Definition of Indicator	Numerator	Denominator	Results (95% Confidence Interval)
Maternal Health	Delivery by skilled attendants	Proportion of birth attended by skilled health personnel – among children less than 6 months only	273	279	97.8% (95.3% - 99.3%)
Breastfeeding Initiation	Early initiation of breastfeeding	Proportion of children born in the last 24 months who were put to the breast within one hour of birth	340	899	37.8% (34.6% - 41.0%)
	Colostrum rate	Proportion of lactating women who did not squeezed out the colostrum before initiating breastfeeding	239	263	90.9% (86.7% - 93.9%)
	Prelacteal feeding rate	Proportion of children 0–5 months of age who were fed with any liquid or food before initiating breastfeeding in the first three days after delivery	193	264	73.1% (67.4% - 78.4%)
Exclusive and Continued Breastfeeding	Exclusive breastfeeding under 6 months	Proportion of infants 0–5 months of age who are fed exclusively with breast milk	83	269	30.9% (25.3% - 36.8%)
	Continued breastfeeding at 1 year	Proportion of children 12–15 months of age who are fed breast milk	156	218	71.6% (65.1% - 77.5%)
	Continued breastfeeding at 2 years	Proportion of children 20–23 months of age who are fed breast milk	39	106	36.8% (27.4% - 47.2%)
	Children ever breastfed	Proportion of children born in the last 24 months who were ever breastfed	907	975	93.0% (91.3% - 94.6%)
	Age-appropriate breastfeeding	Proportion of children 0–23 months of age who are appropriately breastfed	480	878	54.7% (51.3% - 58.0%)

Milk other than breast milk

26.6% of caregivers fed their children with infant formula. This was consistent across age until 17 months (22.6%, 31.1% and 30.0% among the 0-5 months, 6-11 months and the 12-17 months, respectively); and slightly decreased thereafter (21.7% among the 18-23 months).

Around 56.9% of the caregivers had also fed their children any milk (not including infant formula), sour milk or yoghurt. This concerned 25.5% of the 0-5 month olds, 66.7% of the 6-11 months, 70.0% of the 12-17 months and 72.0% of the 18-23 months. Milk feeding frequency for non-breastfed children (proportion of non-breastfed children 6–23 months of age who receive at least 2 milk feedings) was adequate for 61.8%.

The main reason children received infant formula is that the baby not satisfied with breast milk only (27.3%). This reason is also the main reason for mixed-fed children to receive artificial feeding. The others reasons are listed in figure 12.

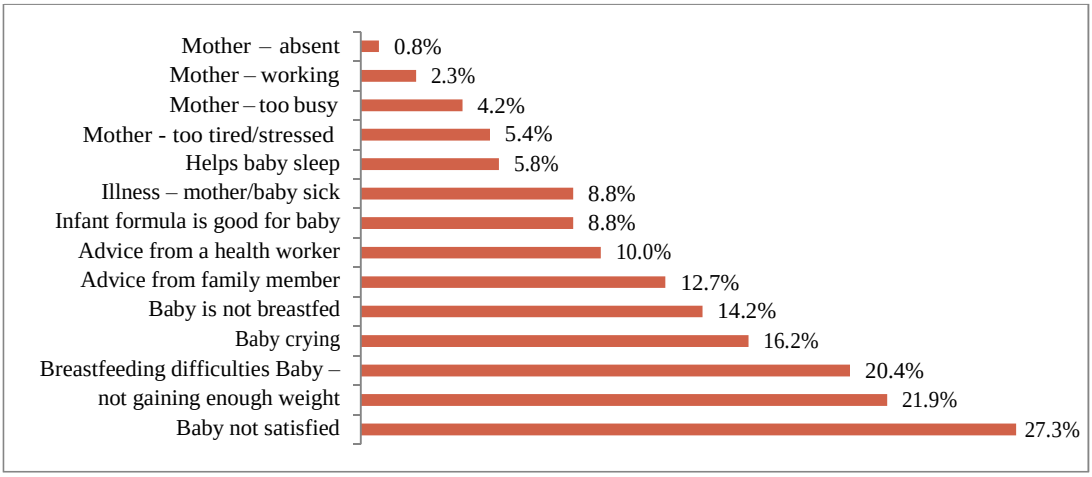


Figure 12: Reason for providing infant formula to children 0 to 23 months (N=260)

The main sources of infant formula were own purchase (77.9%) and donation by charities or NGOs (14.7%). (N=258) The remaining formula after a feed is mainly thrown away (66.4%), made sure baby finishes all (10.3%), given to other family member (9.1%) or kept in room temperature (8.7%) or refrigerated (5.5%). (N=253)

Out of 254 caregivers, 75.6% mentioned following the label's preparation instructions. The caregivers who followed the infant formula instructions were more likely to say that following the instruction is very important for the health of the child ($p<0.01$). Overall, 58.7% caregivers reported that it was very important to follow the instruction, 20.9% fairly important and 14.6% not important.

Those who did not follow the instruction (N=48), mentioned mainly that they added more water (39.6%) or did not measure the water (39.6%).

Table 5: IYCF practices for non-breastfed children

Key Indicators		Definition of Indicator	Numerator	Denominator	Results (95% Confidence Interval)
Non-Breastfed Children	Milk feeding frequency for non-breastfed children	Proportion of non-breastfed children 6–23 months of age who receive at least 2 milk feedings	157	254	61.8% (55.5% - 67.7%)

Use of bottles, cups and pacifier

33.6% of caregivers were using bottles and 62.2% were using a cup for feeding their children less than 23 months any liquid. Bottles were consistently used across age groups while cup was predominantly used for children older than 5 months (table 7). Caregivers living in non-camp setting were more likely to report using a bottle than caregivers living in camps. ($p=0.01$).

44.5% caregiver mentioned it was difficult to feed their child with a cup (28.5% replied yes and 16.0% maybe), 62.4% for caregiver of children under 5 months (47.3% replied yes and 15.1% maybe), and 37.3% older than 6 months (21.0% replied yes and 16.4% maybe). The caregivers of children less than 23 months who did feed their child with a cup were more likely to mention it was difficult to feed the child with a cup. 23.1% (N=645) vs 39.6% (N=326), ($p<0.01$).

Table 6: Bottle and cup feeding of any liquid, and use of pacifier

Age Group (months)	Bottle Feeding N (%)	Cup Feeding N (%)	Use of Pacifier N (%)
0-5 (N=279)	103 (36.9%)	38 (13.7%)	142 (50.9%)
6-11 (N=222)	77 (34.8%)	158 (72.5%)	67 (30.2%)
12-17 (N=300)	107 (35.8%)	247 (83.2%)	64 (21.3%)
18-23 (N=175)	39 (22.7%)	158 (91.3%)	20 (11.4%)

The caregiver feeding with bottles wash them mainly by boiling or sterilising (48.9%). The other ways of cleaning bottles with nipples are listed in figure 13.

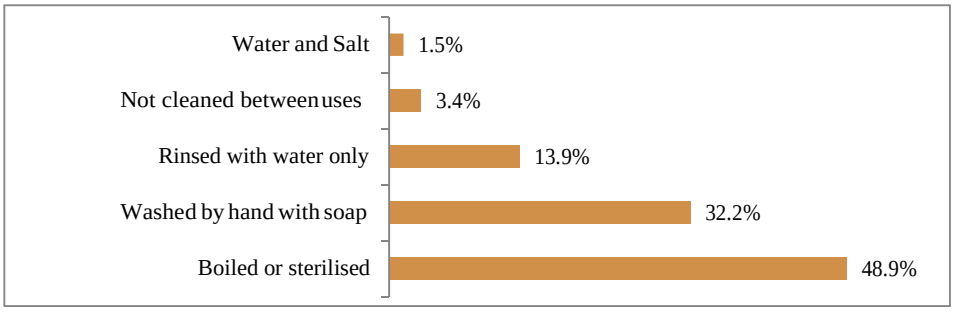


Figure 13: Different ways used for washing bottles with nipples (N=323)

The majority of caregiver feeding with or without a bottle mentioned that children could get diarrhoea from using a bottle (61.3%), the grand majority (47.3%) mentioned that if their child get diarrhoea it will be very serious, 35.4 % mentioned it will be somewhat serious and 17.4% not serious.

The caregivers feeding their child with a bottle were more likely to say that their child will not get diarrhoea from feeding using a bottle: 21.9% (N=636) vs 40.5% (N=316), ($p<0.01$). The caregivers not using bottle were more likely to say they did not know if their child will get diarrhoea from feeding using a bottle: 13.2% (N=316) vs 5.4% (N=636), ($p<0.01$).

There was no significant different between caregivers feeding with or without bottles on the perceived severity of the child to get diarrhoea. The caregivers feeding their child using bottles were more likely to say that if their child gets diarrhoea it will not be serious: 15.4% (N=636) vs 20.6% (N=316), ($p<0.05$).

The use of pacifier was reported by 30.0% of caregivers, mainly within children of 0 to 5 months. There was no significant of use of pacifier between children breastfed or not. The use of pacifier decreases with the age (table 7).

Table 7: Use of bottle, cup or pacifier

Key Indicators		Definition of Indicator	Numerator	Denominator	Results (95% Confidence Interval)
Bottle, Cup, Pacifier Use	Bottle-feeding	Proportion of children 0–23 months of age who are fed with a bottle.	326	971	33.6% (30.6% - 36.7%)
	Cup-feeding	Proportion of children 0–23 months of age who are fed with a cup.	601	966	62.2% (59.1% - 65.3%)
	Pacifier use rate	Proportion of children 0–23 months of age using pacifier.	293	976	30.0% (27.2% - 33.0%)

COMPLEMENTARY FEEDING

Around 1 out of every 10 infants is waiting too long for his or her first foods; introduction of solid, semi-solid or soft foods was timely for a majority of children, 86.6%. The time of introduction of complementary feeding (only for children breastfed in the past for under 6 months) is detailed in figure 14.

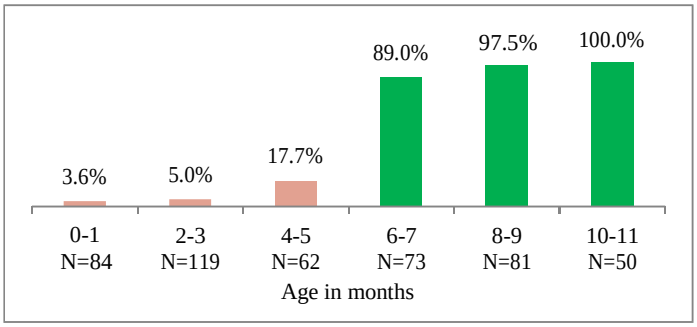


Figure 14: Percent of children fed solid, semi-solid or soft foods the day or night before the survey (only for children breastfed in the past for the under 6), by age groups

Only 43.7% of children 6 to 23 months of age were fed the minimum number of meals a day for their age. Diet diversity was reach by around half of the children from 6 to 23 months with 57.3% of children having minimum dietary diversity, 39.8% among children 6-11, 68.2% and 60.1% for children 12-17 and 18-23 months. There is no significant difference of dietary diversity score between camp or non-camp or urban and rural setting. Caregivers mentioned that 12.3% of children 6 to 23 months ate Plumpy'Nut/Sup/Doz; this was not taken into consideration in the calculation of the dietary diversity score as it is more likely provided as part of a supplementation programme. The dietary diversity score will focus on the general diet of the child. The figure 15 shows the number of food groups consumed across the age.

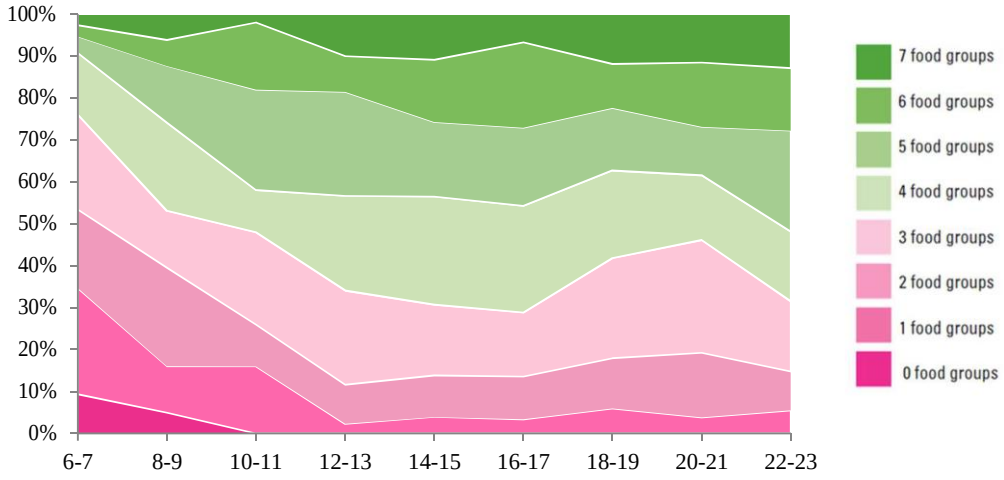


Figure 15: Percent of children 6-23 months of age in each food group category, by age (N=668)

A majority of children more than 5 months had consumed grains, roots or tubers (81.9%) and dairy products (84.1%). In average, 43.7% and 59.6% of children had consumed vitamin A rich fruits and vegetables and other fruits and vegetables, respectively. Flesh food, legumes and nuts, and eggs had been consumed by only 30.4%, 34.0% and 56.4% of the children more than 5 months. The different food group consumed per dietary score reached is detailed in figure 16.

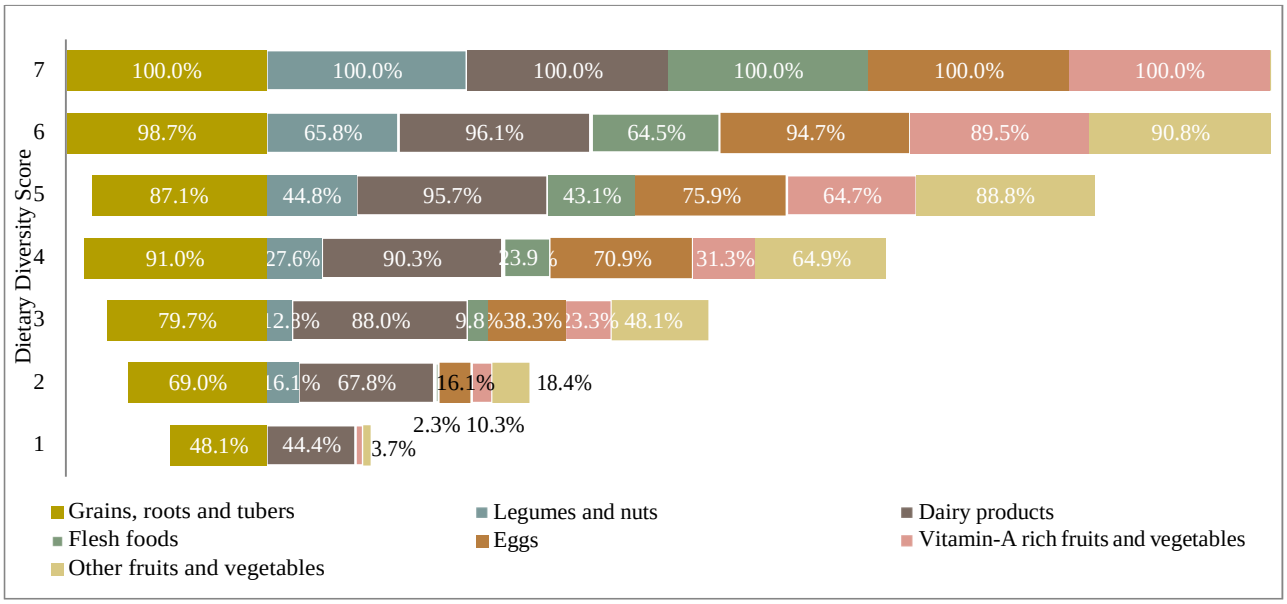


Figure 16: Percent of children 6-23 months who consumed food groups per dietary score reached (N=657)

One third of the children 6 to 23 months ate flesh food when the child reached a dietary diversity score of 5. The figure 17 shows the different consumption of animal source food: dairy product, eggs or flesh food. Infants 6-11 months of age have the lowest rates of consumption of any animal source food.

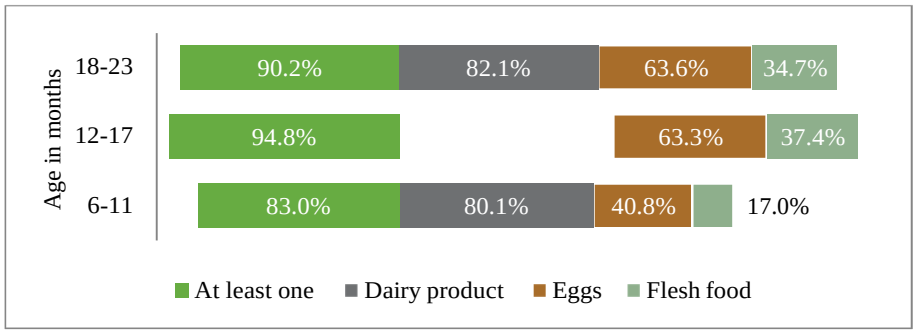


Figure 17: Percent of children 6-23 months of age fed animal source foods, by type and by age (N=668)

Overall, only 1 in every 3 children is receiving a minimum acceptable diet (31.9%); with a diet that has both the minimum diversity and minimum frequency. The children which caregivers stayed more than one year in their current location were more likely to reach minimum acceptable diet: 10.4% (N=230) vs 16.1% (N=746), ($p<0.05$).

For most of the caregivers, it is not difficult to feed their child a variety of different types of foods each day (42.3%), while 20.0% replied that it might be, and 37.7% that it is. The main reason why it is difficult is the lack of money to buy (36.1%), the others answers are showed in figure 18.

The caregivers living in non-camp rural setting were more likely to say that it is difficult to feed their child a variety of different types of foods each day compare to those living in nom-camp urban setting: 24.3% (N=107) vs 39.8% (N=508), ($p<0.01$).

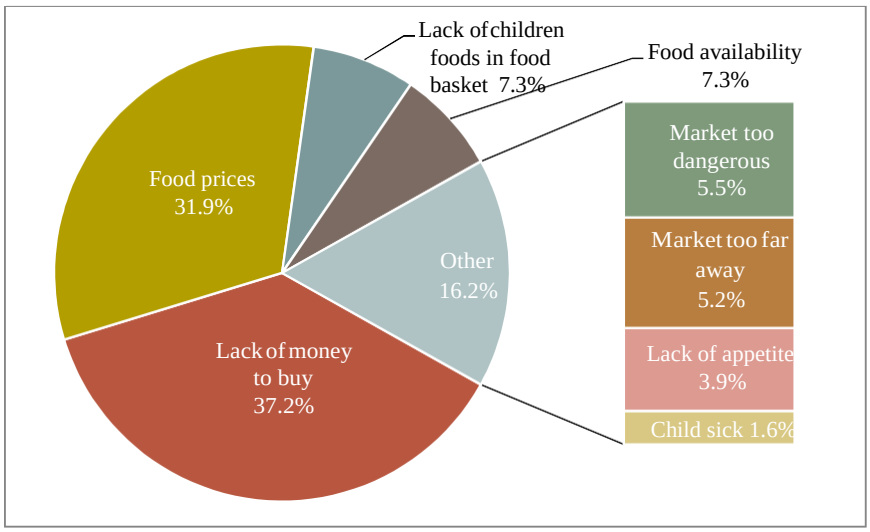


Figure 18: Main reasons why it is difficult to feed their child from 6 to 23 months a variety of different types of foods each day (N= 393)

The caregivers who mentioned that it is not difficult to feed their child a variety of different types of foods each day were more likely to follow best practices in term of Minimum Dietary Diversity, Minimum Meal Frequency and Minimum Acceptable Diet. ($p<0.01$)

The caregivers who mentioned that it is difficult to feed their child a variety of different types of foods each day were more likely to say that it was difficult to wash their hands with soap before feeding their child: 10.5% (N=257) vs 5.9% (N=288), ($p<0.05$).

Out of the 107 caregivers (15.7%) that replied that it was difficult to wash their hands with soap before feeding their child, the main reason why was the lack of water (59.8%), the following main answers were the lack of water storage at home (16.8%), the cold weather (13.1%) and the lack of soap (6.5%).

Table 8: Complementary feeding practices

Key Indicators		Definition of Indicator	Numerator	Denominator	Results (95% Confidence Interval)
Complementary Feeding	Introduction of solid, semi-solid or soft foods	Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods	103	119	86.6% (79.0% - 92.4%)
	Minimum dietary diversity	Proportion of children 6–23 months of age who receive foods from 4 or more food groups	383	668	57.3% (53.4% - 61.1%)
	Minimum meal frequency	Proportion of breastfed and non-breastfed children 6–23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.	292	668	43.7% (40.0% - 47.6%)
	Minimum acceptable diet	Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk).	211	661	31.9% (28.4% - 35.5%)

Feeding practices by age

The figure 19 describes breastfeeding practices by age. Each of the feeding categories is non-overlapping, that is, each child from the survey is classified into only one feeding category. The feeding category is based on 24 hours recall.

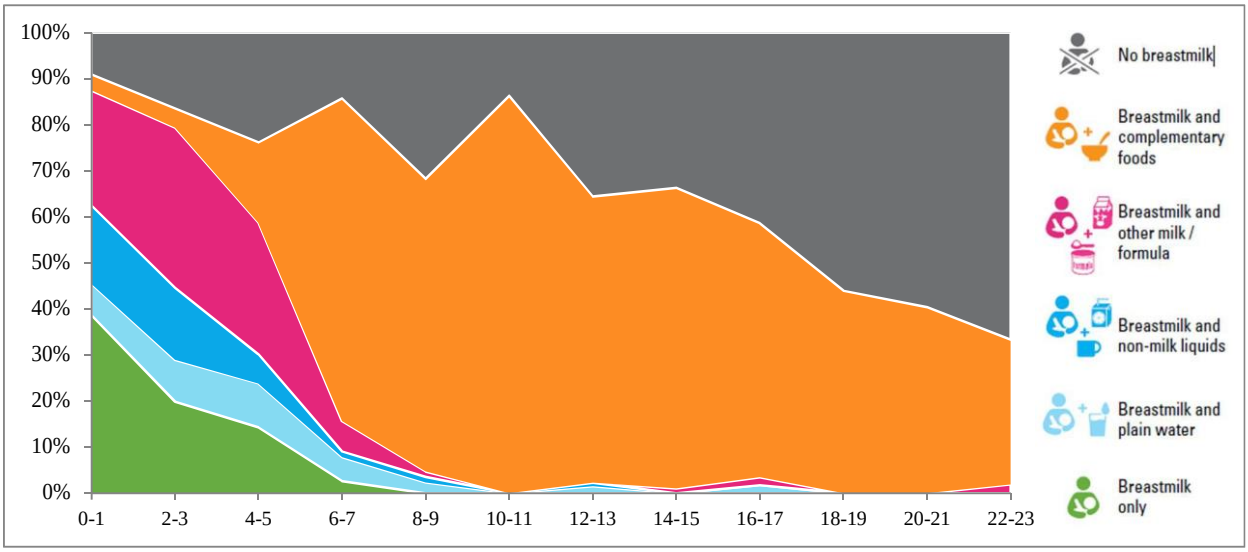


Figure 19: Feeding practices by age (N=945)

Not all 0-1 month infants were breastfed, from 90.9% of children breastfed, breastfeeding decreased sharply with only 76.2% of infants breastfed at 4-5 months, and 86.3% and 33.3% of the children breastfed at 10-11 months and 22-23 months, respectively. Moreover, only 38.6% of the 0-1 months were exclusively breastfed and exclusive breastfeeding further fell sharply with age with only around 19.8% of the 2-3 months and 14.3% 4-5 months exclusively breastfed. At 0-1 months, 6.8% and 17.0% of the non-exclusively breastfed infants also received plain water and other non-milk liquid, respectively. In average, 29.4% of non-exclusively breasted children from 0-5 months receive other milk/formula. The initiation of complementary feeding started at 0-1 month for 3 children and increase progressively. At 4-5 months, around 17.5% of the non-exclusively breastfed infants also received solid, semi solid or soft food.

MATERNAL NUTRITION

The median number of meals eaten by the caregivers the day before the survey is 3. Mothers not pregnant were 33.9% receiving less than three meals the day prior the survey, they were more likely to give this answer than mother who were pregnant ($p<0.05$) .The latter were 24.7% who received less than 3 meals during the same period.

The main reason for eating less than 3 meals was that it is not important to eat 3 meals, the others reasons are reported in figure 20.

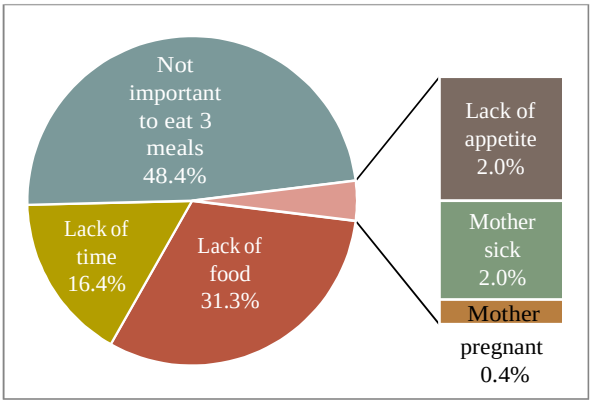


Figure 20: Reasons for eating less than 3 meals for all primary caregivers (N=256)

Most of the caregivers replied that it was very important to eat more food during pregnancy and while breastfeeding (62.2%), 24.7% replied it was somewhat important and 13.1% not important.(N=932) Pregnant women who ate 3 meals the days before the survey were not more likely to say it is very important.

Among all mothers, the majority (40.3%) mentioned it is not difficult to eat more food than usual during pregnancy or breastfeeding. It was mentioned difficult for 36.4% and somehow difficult for 23.3%. (figure 21, N=877) Pregnant women who did not eat 3 meals the days before the survey were more likely to say it is difficult: 37.2% (N=113) vs 56.8% (N=37) ($p<0.05$).

The reasons given by mothers to say it is difficult or somehow difficult are listed in figure 22. Mother who did not eat 3 meals the day before the survey were 1.4 more likely to say that food prices was one reason why it is difficult (55.5%) compare to those who ate 3 meals and declared the same (46.3%), ($p<0.05$).

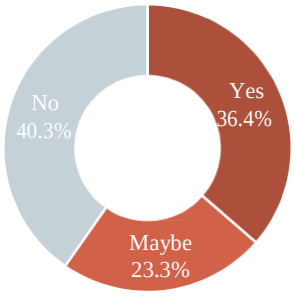
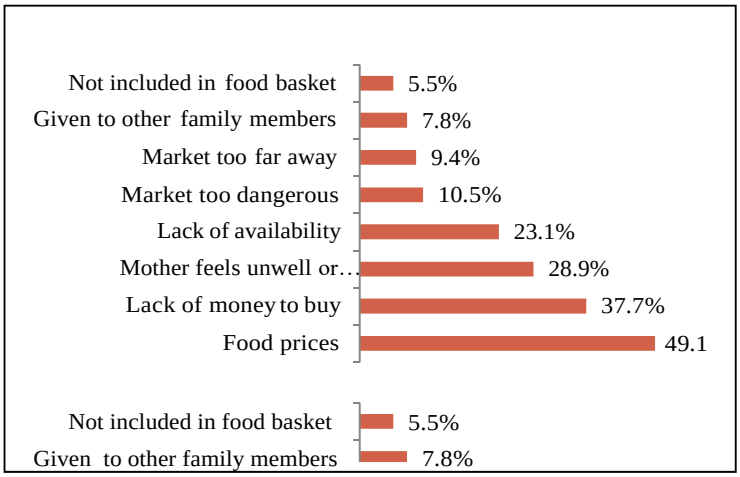


Figure 211: Perceived difficulty of mothers to eat more when pregnant or while breastfeeding (N=877)



Around 1 out 2 caregivers, 53.2%, shared that there has been a lack of food in their household during the last 30 days. (N=932)The median number of days that was mentioned when household restrict consumption during the last seven days by adults in order for small children to eat was 1 day. The number of days vary from 0 to 7, with 40.9% replied 0 day, 15.9% 1 days, 15.3% 2 days, 9.9% 3 days, 5.9% 4 days, 2.8% 5 days, 3.0% 6 days and 6.3% 7 days. Caregivers living in camps were more likely to say they restrict consumption by adult for small children to eat every days in the last seven days compare to those living in non-camp setting: 5.1% (N=450) vs 17.4% (N=46). ($p<0.05$)

The majority of the caregiver have heard of anaemia (95.3%), and could list in average two foods that contain iron. (N=932) The main source of foods that was identified as containing iron is showed in figure 23.

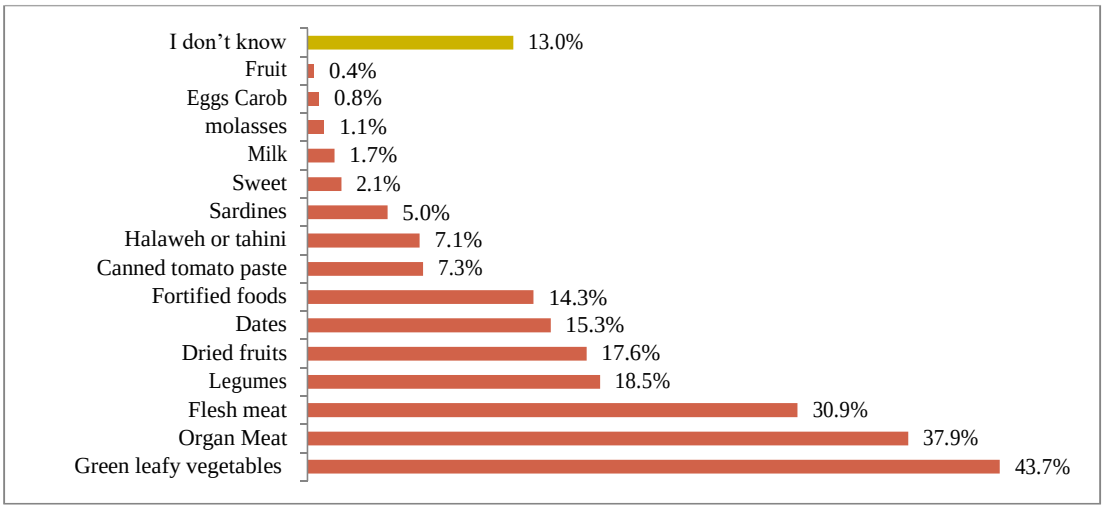


Figure 23: Percent of caregivers that listed this food as containing iron (N=932)

DISCUSSION AND RECOMMENDATIONS

In general, the level of knowledge on IYCF best practice is low, with barely over half of the caregivers questioned knowing the recommendation of early initiation of breastfeeding and exclusive breastfeeding; and less than half for administration of colostrum, continued breastfeeding up to two years or beyond and ways to increase milk production (figure 4). The belief of the need for pre-lacteal feeding can be seen in both knowledge and practices, only one third of the caregivers mentioned that colostrum should be given alone within the first three days after delivery, while the others mentioned that new-born should receive colostrum with or without other liquids, as water with sugar or anise.

Knowledge is the key for a caregiver to switch between the pre-contemplation to contemplation stage to change behaviour. Insufficient understanding on IYCF practices highlights the need for scaling up nutrition intervention. As we know, knowledge alone is not likely to result in behaviour change. For example, the knowledge of timely initiation complementary feeding at 6 month was low (28.5%) but in comparison introduction of solid, semi-solid or soft foods was relatively high (86.6%); or around half of the caregivers mentioned that a child should start being breastfed within one hour and early initiation of breastfeeding was lower than 50% (37.8%).

Most of the activities we tend to design focus on simply giving people facts, such as the advantages of a behaviour. Hence challenges remain for translating the acquired knowledge into practice. The need for practising IYCF recommendation can be done through the promotion of Mother Baby Areas in specific location (e.g. hospital, women centre) or creation of Mother-to-Mother Support Groups, which will allow increasing the point of contact with skilled staff who can support caregivers in the long term. The coverage of CHW can also be extended as a very low number of mothers seek advices concerning breastfeeding difficulties from CHWs or social workers; this was especially true for mother living in rural setting.

The findings show that there is an average overall IYCF practices with clear struggle to pursue breastfeeding until two years and ensure adequate complementary feeding. Average IYCF practices are noticed with a particularly low early initiation of breastfeeding, exclusive breastfeeding, continued breastfeeding at 2 years and minimum acceptable diet, due to a combination of an average diet diversity and meal frequency. In addition, the number of meals is clearly insufficient but more information should be collected on the reason for such limitation in terms of quantity and diversity. Although financial constraints (lack of money and food prices) are the main reasons shared by caregivers to explain their difficulties to feed their child from 6 to 23 months a variety of different types of food every day; beliefs, lack of knowledge among others might also impact heavily on the decision process. A more detailed study on barriers or on the diet of children 6 to 23 months should be performed in order to adjust the current interventions and better design or complement future projects.

The finding confirms that the majority of children are being mixed-fed, with infant formula or other animal milk. Bottle feeding is widely used, and cup feeding is not a common practice for infants 0-5 months. Effort should continue for the sensitization to promote breastfeeding particularly in cases of unnecessary bottle feeding and for mother who delivered by caesarean section, which is very common. This will require the involvement of all actors, particularly medical practitioner and relevant authorities.

While the majority of mothers ate three meals the day before the survey, one third ate less than three meals. Among them almost half mentioned that it was not important to eat three meals. Pregnant women were more likely to mention that it was difficult for them to eat more. As for increasing children diversity, the main constraint was financial. However, caregivers have knowledge of anaemia and the potential source of iron in a diet.

Key recommendations:

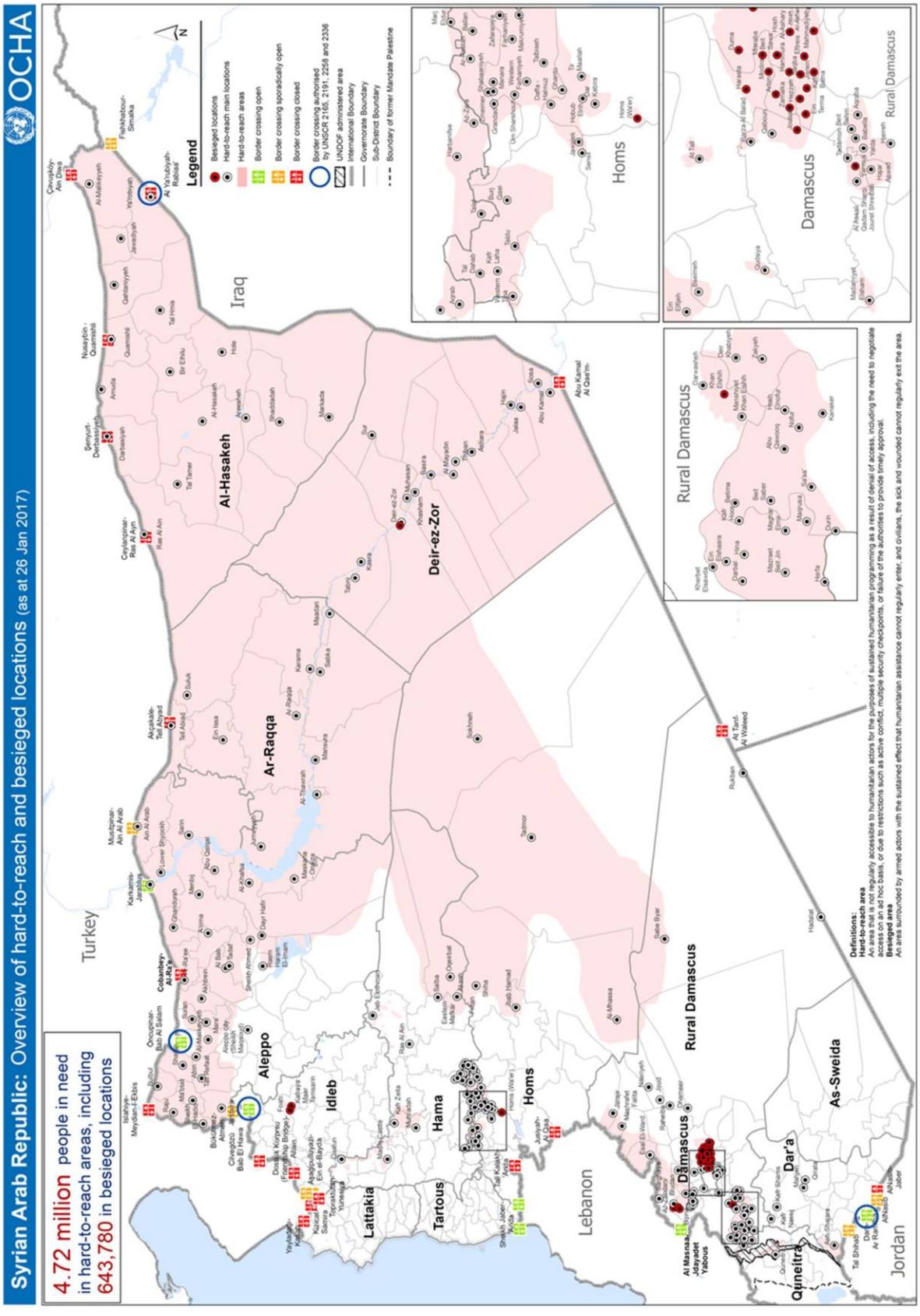
To conduct a participatory dissemination workshop for the KAP findings to achieve buy- in and ownership of its findings and active involvement of key community influencers/change agents (religious, traditional and other local community leaders, NGOs, and CHWs), caregivers and their critical networks, in generating solutions for the challenges surfaced by the KAP survey .

The following are the specific recommendations agreed among the partners:

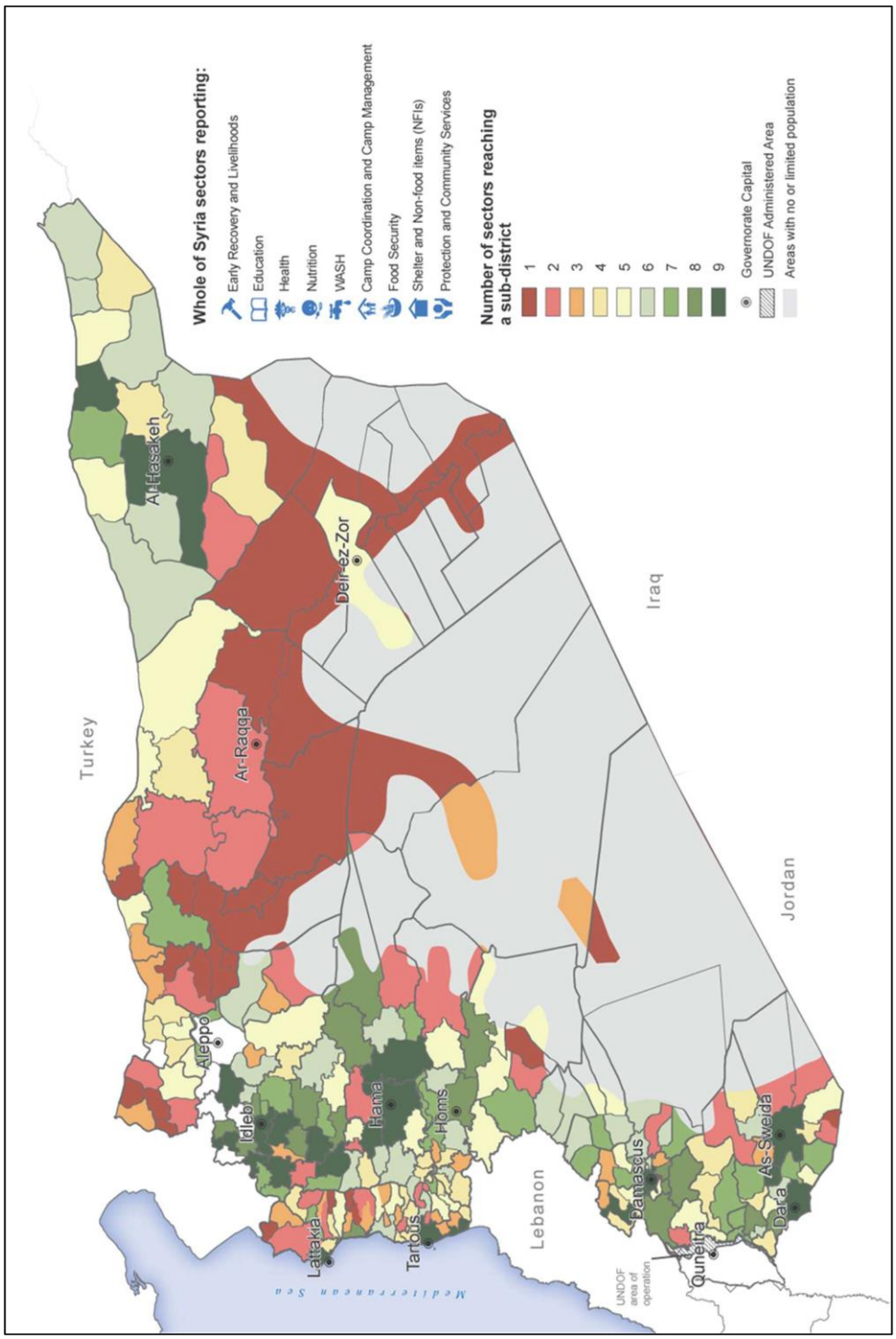
- Train, encourage and support capacity building of Health and Nutrition staff on quality IYCF counselling.
- Engage community health workers in the zones (where they exist) and pilot techniques like Trial of Improved Practices (TIPS) that involve counselling on recommended breast feeding practices, follow up visits to assess progress made, and confirm outcome of the trials.
- Increase the awareness of stakeholders at community level (key influencers; Sheikhs, grandmothers, fathers etc.) and build their capacities to promote appropriate knowledge and practices of infant and young child feeding.
- Strengthen the behaviour change communication in the IYCF programme through expanding the range of behaviour change strategies used, strengthen the social support behaviour change strategies, and tailor messages to the local contexts with a focus on visible improvements in health.
- Support events and advocacy initiatives like the IYCF.
- World Breastfeeding Week. Efforts should also be made to expand the scope to cover both rural and urban areas, liberated and besieged areas, and cross line and cross boarder operations.
- Scale up the use of micronutrient supplementation using sprinkles and link it to complementary feeding sensitization and counselling
- Engage stakeholders like the Rapid response mechanism partners is expected to yield better understanding of negative effects of breast milk substitutes hence reduced distribution.
- In line with the recommendations of the IYCF-E strategy advocate for the integration of IYCF with other sectors (e.g. Food Security and Livelihood, WASH, Protection)
- Conduct a barrier analysis to identify the reasons for the poor practices, like poor exclusive breastfeeding and poor minimum dietary diversity or minimum acceptable diet for children; and meal frequency for pregnant or/and lactating women, as well as to identify the determinants affecting those behaviours
- Expanding the scope of reach for BMS Standard Operating Procedures to ensure that there is a clarity of understanding and appreciation from key community stakeholders is recommended.

ANNEXES

Annexe 1: Overview of hard-to-reach and besieged locations in Syria, as of 26 January 2017, OCHA



Annexe 2: Whole of Syria sectors' reach at sub-district level, December 2016, OCHA



Annexe 3: KAP Questionnaire (adapted to Excel for KOBO Collect)

IYCF-E KAP SURVEY					
0.1	Cluster number		0.2	Household number	
0.3	Interviewer Name		0.4	Interview ID no.	
0.5	Supervisor Name		0.6	Supervisor ID. No	
0.7	Date		0.8	Setting	IDP Camp Non-camp, urban Non-camp, rural
0.9	Are there any children under the age of 2 years living in this household?		Yes No		 □ END

For each child under 2: 1. Identify who is the primary caregiver* and 2. Establish whether the primary caregiver will be present today.
*The PRIMARY CAREGIVER of each child under 2 years of age should be interviewed. A child's "primary caregiver" is defined as the person who assumes the most responsibility in caring for the health and well-being of a child. This is usually a child's mother. If the mother is absent (long term), this might be another family member (e.g. aunt, grandma, older sister) or the child's father.

MODULE 1: PRIMARY CAREGIVER INFORAMATION				
SAY: Hello, my name is_____and I work with_____. We are conducting a survey and would appreciate your participation. I would like to ask you about yourself and about the health and wellbeing of any children under the age of two whom you care for. This information will help us to measure whether we are meeting our goals to improve children's health. I want to assure you that whatever information you provide us with will be kept strictly confidential (secret) and we will never reveal your name or answers. We will not keep a record of your name and address. Participation in this survey is voluntary. There are no right or wrong answers. You can skip any questions that you do not want to answer or stop the interview at any time. However, we hope that you will participate in this survey because your views are important. At this time, do you want to ask me anything about the survey? (Answer any questions) Do you agree to be interviewed?				
1	Respondent agrees to be interviewed	Yes No	1 2	□ END
1.1	How old are you? Probe: How old were you at your last birthday?	Years:_____ Don't Know	 88	
1.2	Have you been living in (name of current location) for more or less than one year? Report years in months, if since birth enter the age of respondent 1.2a. If equal or more than one year, for how long? 1.2b If less than one year, for how long?	Less than one year Equal or more than one year Years: Months:	1 2	
1.4	Are you pregnant?	Yes No Don't Know No response	1 2 88 99	

1.5 CHILDREN UNDER 2							
Complete NAME and GENDER for all children first, then collect further information.							
	PLEASE TELL ME THE NAMES OF THE CHILDREN UNDER 2 YEARS OF AGE FOR WHO YOU ARE THE PRIMARY CAREGIVER PROBE: Is there anyone else?	IS (name) MALE OR FEMALE? 1 Male 2 Female	WHAT IS (name's) DATE OF BIRTH? Use local calendar of events 88 DK			HOW OLD IS (name)? Record in completed months. Check against calculation of DOB if given	
	NAME	M F	DAY	MONTH	YEAR	AGE	
A		1 2					
B		1 2					
C		1 2					
D		1 2					

MODULE A - CAREGIVERS OF CHILDREN 0 – 23 MONTHS				
MODULE A1: BREASTFEEDING KNOWLEDGE & ATTITUDE				
A1.1	If a mother has difficulties with breast-feeding, who can help the mother to solve the problem? Select all that are mentioned	Doctor Midwife CHW / Social Worker Traditional Birth Attendant Mother / Mother in law	1 2 3 4 5	

		Other family member Friend Other, specify:_____ Don't know	6 7 0 88	
A1.2	Many times, mothers worry about not having enough breast milk to feed their babies. Please tell me different ways a mother can increase her milk production Select all that are mentioned	Breastfeed exclusively (< 6) (Hand) express milk Drink enough liquids Breastfeed often (more frequently) Let the baby suckle on demand Let the baby suckle as long as wanted Keep mother & baby close together Avoid bottles and pacifiers (dummies) Eating well Eating specific foods e.g. green foods Other, specify:_____ Don't know	1 2 3 4 5 6 7 8 9 10 0 88	
A1.3	Do you think babies should be breastfed according to a schedule or whenever baby (and/or mother) wants to?	According to a schedule Whenever baby wants Whenever mother wants Don't know	1 2 3 88	
A1.4	Some women can find it uncomfortable to breastfeed in the presence of other people. Do you feel comfortable breastfeeding in front of: a) Extended family members? (E.g. aunt, uncle, father-in-law etc.) b) Unrelated women? c) Unrelated men?	Yes No Don't Know Yes No Don't Know Yes No Don't Know	1 2 88 1 2 88 1 2 88	
A1.5	Until what age is it recommended that a woman breastfeeds her child?	No. of months:_____		
MODULE B - 0 – 6 MONTHS				
MODULE B1: BREASTFEEDING INITIATION				
B1.1	Where did you give birth to (NAME)?	At home Private health facility NGO health facility Other, specify:_____	1 2 3 0	 □ B1.3 □ B1.3 □ B1.3
B1.2	Who assisted the delivery at home? Select primary assistant	Traditional Birth Attendant Midwife Family Member Nobody Other, specify:_____ Don't know / Don't remember	1 2 3 4 0 88	□ B1.4 □ B1.4 □ B1.4 □ B1.4 □ B1.4 □ B1.4
B1.3	Was (name) delivered by caesarean section or normal delivery?	C-section Normal (vaginal) delivery Don't know / Don't remember	1 2 88	
B1.4	Immediately after birth, was (NAME) put directly on the bare skin of your chest so that you had skin-to-skin contact?	Yes No Don't know / Don't remember	1 2 88	
B1.5	How long after the birth was (name) bathed for the first time?	Immediately / within the 1st hour From 1 to 6 hours From 7 to 24 hours More than 24 hours Don't know / Don't remember	1 2 3 4 88	
SAY: I would now like to ask you some questions about feeding a newborn after delivery				
B1.6	How long after birth do you think a baby should start breastfeeding?	Immediately / within the 1st hour Within the 1st day (1 – 23 hours) More than 24 hours When the baby is ready Other, specify:_____ Don't know / Don't remember	1 2 3 4 0 88	
B1.7	In your opinion, what is the first food or liquid a newborn baby should receive?	Colostrum (the 1st breastmilk)	1 2	

	Select all that are mentioned	Breastmilk that comes after colostrum (3^{rd} / 4^{th} day) Milk (not breastmilk) Infant formula Plain water Water with sugar Anise Fruit juice Tea/infusion Traditional medicine Other, specify,_____ Don't Know	3 4 5 6 7 8 9 10 0 88	
B1.8	Has (NAME) ever been breastfed?	Yes No Don't Know / Don't Remember	1 2 88	□B1.13b □ B1.13b
B1.9	How long after birth did you put (NAME) to the breast?	Immediately / within the 1^{st} hour Within the 1^{st} day (1 – 23 hours) More than 24 hours Don't know / Don't remember	1 2 3 88	
B1.10	Did you squeeze out and throw away the first milk (colostrum)? Probe: the first milk that is yellow to orange in colour, thick and sticky	Yes No Don't know / Don't Remember	1 2 88	□B1.12 □B1.12
B1.11	Why did you squeeze out and throw away the first milk (colostrum)? Select all that are mentioned	Can cause jaundice Poisonous / toxic Hot / Dirty Hard to digest Advised by family member Advised by health worker Don't know / Don't Remember Other, specify:_____	1 2 3 4 5 6 88 0	
B1.12	In the first three days after delivery, was (NAME) given anything else BEFORE starting breastfeeding? Prompt: did you give sugar water or anise before breastfeeding?	Yes No DK / Don't Remember	1 2 88	□ B2 □ B2
B1.13a B1.13b	What was (NAME) given to drink before breastmilk? Probe: Anything else? Multiple answers possible. "NOTHING" is not a valid response. Return and correct question 1.19 In the first three days after delivery, what was (name) given to drink? Probe: Anything else? Multiple answers possible. "NOTHING" is only a valid response if no other response category is selected	Milk (not breastmilk) Infant formula Plain water Sugar water / Dextrose Anise Fruit juice Tea/infusion Prescribed medicine Nothing Don't know / Don't remember Other, specify:_____	1 2 3 4 5 6 7 8 9 88 0	

MODULE B2 EXCLUSIVE BREASTFEEDING				
	CHECK B1.8 – Has (NAME) ever been breastfed?	Yes No	1 2	 □ B2.3
B2.1	Was (NAME) breastfed yesterday during the day or at night? If no, PROBE: or did he or she consume breastmilk yesterday by cup, spoon or bottle?	Yes No Don't know/don't remember	1 2 88	□ B2.4 □ B2.4
B2.2	You mentioned that (NAME) has breastfed in the past but did not breastfeed yesterday. Why did you not breastfeed (NAME) yesterday? (Why did you stop breastfeeding?) Select all that are mentioned	Advice from a health worker Advice from family member Breastfeeding difficulties (pain, not enough milk etc.) Baby not gaining enough weight Illness – mother/ baby sick Mother – working / separated Mother - pregnancy Mother - psychological state Mother – too busy (lack of time) Husband wanted me to stop Lack of privacy Infant formula is better	1 2 3 4 5 6 7 8 9 10 11 12	

		I did not like breastfeeding	13	
		Other, specify:_____	14	
		Don't know / Don't remember	88	
B2.3	If name did not drink breastmilk yesterday, what did (name) drink? PROBE: Anything else? Select all that are mentioned	Infant formula	1	☐ B3
		Other milk (not formula)	2	☐ B4
		Water	3	☐ B4
		Nothing	4	☐ B4
		Other, specify:_____	0	☐ B4
		Don't know/don't remember	88	
B2.4	Were there any difficulties with breastfeeding (name) yesterday during the day or at night?	Yes	1	
		No	2	☐ B2.7
		Don't know / don't remember	88	☐ B2.7
B2.5	What were the main difficulties with breastfeeding? Select all that apply	Not enough milk supply	1	
		Poor quality of milk	2	☐ B2.7
		Breastfeeding is painful	3	☐ B2.7
		Breast condition / problem (e.g. cracked nipples)	4	☐ B2.7
		Baby not able to suckle/attach to breast	5	☐ B2.7
		Baby refused breast	6	☐ B2.7
		Illness – mother or child sick	7	☐ B2.7
		Mother - stressed	8	☐ B2.7
		Mother - not eating well	9	☐ B2.7
		Mother - busy (lack of time)	10	☐ B2.7
		Mother – tired / exhausted	11	☐ B2.7
		Lack of privacy	12	☐ B2.7
		Other, specify:_____	0	☐ B2.7
B2.6	What is the reason that you feel you do not have enough milk? Select all that are mentioned	Mother's diet - not enough food	1	
		Mother's diet - poor quality/diversity	2	
		Stress/ problems	3	
		Too much work/not enough rest	4	
		Breastfeeding too little	5	
		Breastfeeding for a short time	6	
		Not drinking enough water	7	
		Mother is sick	8	
		Breast size / shape	9	
		Other, specify:_____	0	
		Don't know	88	

B2.7	Now I would like to ask you about all other liquids that (NAME) may have had yesterday during the day or the night. Please include liquids consumed outside of your home. I am interested in whether your child had the item even if it was combined with other foods. Did (NAME) drink (name of item) yesterday during the day or the night?		YES	NO	DK
B2.7a	Plain Water	WATER	1	2	88
B2.7B	Milk such as tinned, powdered, condensed or fresh animal milk like Nido, Halibuna, Almaida, Baladna	MILK	1	2	88
B2.7C	Juice or Juice Drinks like Squeeze, Tang, Slush, Rani, Seles	JUICE	1	2	88
B2.7D	Yoghurt and Home Made Yoghurt like Buk, Leban, Iran Dabdoub, Ayran	YOGHURT	1	2	88
B2.7E	Infant Formula like Sahaa, Nan, Babyluck, Selia, Humana	FORMULA	1	2	88
	How many times did feed (name) infant formula yesterday?	Times			
B2.7F	Thin Porridge like Cerelac, Oatmeal	PORRIDGE	1	2	88
B2.7G	Tea, coffee	TEA/COFFEE	1	2	88
B2.7H	Infusions such as Babay (Chamomile)	INFUSION	1	2	88
B2.7I	Any sodas or other sweet drinks, like Pepsi or Methe	SODA	1	2	88
B2.7J	Anything else? Specify	ANYTHING	1	2	88

B2.8	Did (NAME) eat any solid, semi-solid or soft foods yesterday during the day or at night?	Yes	1	
		No	2	
		Don't Know / Don't Remember	88	
B2.09	I In your opinion, what food or drink should a 4 month old baby be given?	Breastmilk only	1	
		Formula milk only	2	
		Breastmilk and formula milk	3	
		Breastmilk & solid/semi-solid foods	4	
		Other, specify:_____	0	
		Don't Know	88	

B2.10	Do you think it is good, okay or not good for your baby's health to be breastfed exclusively for 6 months? That is, to give only breastmilk and nothing else, not even water.	Very good Okay Not good Don't Know	1 2 3 88	□B2.12 □B2.12 □B2.12
B2.11	Why do you think it is <u>not good</u> for a baby's health to be breastfed exclusively?	Infant formula is better Breastmilk alone is not enough Baby gets thirsty when it is hot Other, specify:_____	1 2 3 88	
B2.12	What do you think would happen to (NAME) if he/she is not exclusively breastfed?	Nothing Will become sick Will not gain weight Will be hungry Will get diarrhoea Other, specify:_____	1 2 3 4 5 88	
MODULE B3: ARTIFICIAL FEEDING				
CHECK B2.3 – did infant receive infant formula yesterday?		Yes No Don't Know	1 2 3	□B4 □ B4
SAY: You mentioned that (name) was given infant formula yesterday. I would now like to ask you more questions about this.				
B3.1	What is the reason that (NAME) was given infant formula yesterday? Select all that are mentioned	Baby is not breastfed (at all) Advice from a health worker Advice from family member Breastfeeding difficulties (pain, not enough milk etc.) Baby – not gaining enough weight Illness – mother / baby sick Mother - too tired/stressed Mother – working Mother – absent (long term) Mother – too busy (lack of time) Helps baby sleep Baby crying Baby not satisfied / breastmilk is not enough Lack of privacy to BF Infant formula is good for baby Other, specify:_____	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 0	
B3.2	How did you get the infant formula that you fed (NAME) yesterday?	Bought it / paid for it Donation from a charity / NGO Donation from camp management Donation from local council Included in food basket / GFD Given by a friend Given by a health worker Other, specify:_____	1 2 3 4 5 6 7 0	
B3.3	Last time you prepared infant formula for(NAME), did you measure the water according to the instructions on the tin? Note: caregivers may also use liquids other than water. Aask whether liquid was measured.	Yes No Don't know / Don't remember Not applicable (RUIF)	1 2 88 100	□ B3.5 □ B3.5 □ B3.5
B3.4	What did you do differently than the instructions?	Added more water Added less water Did not measure water Used liquid other than water Not sure Other, specify:_____	1 2 3 4 5 0	
B3.5	In your opinion, how important for (NAME)'s health is it to follow the label's preparation instructions?	Very important Fairly important Not important Don't know	1 2 3 88	
B3.6	When you feed (NAME) infant formula on a normal day, what do you usually do with an5 remaining formula?	Keep it (room temperature) Keep it (refrigerated) Throw it away Make sure baby finishes all Give to other family member/ drink it	1 2 3 4 5	

		Other, specify:_____	0	
MODULE B4: BOTTLES, CUPS AND PACIFIERS				
B4.1	Yesterday, during the day or at night, did (name) drink anything from a bottle with a nipple?	Yes No Don't know / don't remember	1 2 88	 □ B4.3 □ B4.3
B4.2	In the past 2 weeks, what are the different ways you might have cleaned (NAME)'s bottle before using it again? Prompt: Any other ways? Select all that are mentioned	Rinsed with water only Washed by hand with soap Boiled or sterilised Not cleaned between uses Other, specify:_____	1 2 3 4 0	
B4.3	Do you think that (NAME) could get diarrhoea from using a bottle?	Yes Maybe No Don't know	1 2 3 88	
B4.4	How serious do you think it is if (NAME) gets diarrhoea?	Very serious Somewhat serious Not serious	1 2 3	
B4.5	Did (NAME) drink anything from an open cup yesterday during the day or at night?	Yes No Don't know / Don't remember	1 2 88	
B4.6	Is it difficult to feed (NAME) liquids from a cup?	Yes No Don't know / Don't remember	1 2 3	
B4.7	Did (NAME) use a pacifier yesterday during the day or at night?	Yes No Don't know / don't remember	1 2 88	
MODULE C - 6 – 23 MONTHS				
MODULE C1: BREASTFEEDING INITIATION				
C1.1	Where did you give birth to (NAME)?	At home Private health facility NGO health facility Other, specify:_____	1 2 3 0	
C1.2	Has (NAME) ever been breastfed?	Yes No Don't Know / Don't Remember	1 2 88	 □ C3 □ C3
C1.3	How long after birth did you put (NAME) to the breast?	Immediately / within the 1st hour Within the 1st day (1 – 23 hours) More than 24 hours Don't know / Don't remember	1 2 3 88	
MODULE C2: CONTINUED BREASTFEEDING				
C2.1	Was (NAME) breastfed yesterday during the day or at night? If no, PROBE: or did he or she consume breastmilk yesterday by cup, spoon or bottle?	Yes No Don't Know / Don't Remember	1 2 99	□ C2.3 □ C3
C2.2	You mentioned that (NAME) has breastfed in the past but did not breastfeed yesterday. Why did you not breastfeed (NAME) yesterday? (Why did you stop breastfeeding?)	Advice from a health worker Advice from family member Breastfeeding difficulties (pain, not enough milk etc.) Baby stopped / lost interest Baby's age Illness – mother/ baby sick Mother – working / separated Mother - pregnancy/ Mother - psychological state Mother – too busy (lack of time) Husband wanted me to stop Lack of privacy Infant formula is better I did not like breastfeeding Breastfeeding younger child Other, specify:_____ Don't know / Don't remember	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 88	 GO TO C3
C2.3	Were there any difficulties with breastfeeding (NAME) yesterday during the day or at night?	Yes No	1 2	 □ C3

		Don't know / don't remember	88	□ C3
C2.4	What were the main difficulties with breastfeeding (name)? Select all that are mentioned	Not enough milk supply	1	
		Poor quality of milk	2	□ C3
		Breastfeeding is painful	3	□ C3
		Breast condition / problem (e.g. cracked nipples)	4	□ C3
		Baby not able to suckle / attach to breast	5	□ C3
		Baby refused breast	6	□ C3
		Illness – mother or child sick	7	□ C3
		Mother - stressed	8	□ C3
		Mother - not eating well	9	□ C3
		Mother - busy (lack of time)	10	□ C3
		Mother – tired / exhausted	11	□ C3
		Breastfeeding younger child	12	□ C3
		Lack of privacy	13	□ C3
		Other, specify:_____	0	□ C3

MODULE C3: COMPLEMENTARY FEEDING

C3.1	When do you think is the right age to introduce solid and semi-solid foods to your baby?	Months:_____		

C3.2 Now I would like to ask you some liquids and foods that (name) may have had yesterday during the day or the night. Please include liquids consumed outside of your home. I am interested in whether your child had the item even if it was combined with other foods.
For example, if (name) ate a (INSERT SYRIAN EXAMPLE) made with a (INSERT SYRIAN EXAMPLE), you should reply yes to any food I ask about that was an ingredient in the (INSERT SYRIAN EXAMPL or (INSERT SYRIAN EXAMPLE).
Please do not include any food used in a small amount for seasoning or condiments (like chillies, spices or herbs)
Yesterday during the day or at night, what did (name of the infant) eat?

			YES	NO	DK
C3.2A	Group 1: Grains, Roots & Tubers e.g. bread, bulger, rice, frikeh, kaak, pasta/'andoumeh', manakish, potato, beet root, porridge		1	2	99
C3.2B	Group 2: Legumes and Nuts e.g. lentils, hommos, beans, foul, nuts		1	2	99
C3.2D	Group 3: Dairy Products		1	2	99
	Milk such as tinned, powdered, condensed or fresh animal milk like Nido, Luna or Carnation				
	How many times did you feed (name) milk?	Times			
	Infant formula such as Nan, S26.				
	How many times did you feed (name) formula?	Times			
	Yogurt or drinking yogurt such as XXX				
	How many times did you feed (name) yoghurt?	Times			
	Cheese or other dairy products such as labna				
C3.2E	Group 4: Flesh Foods e.g. meat (kebab, kafta, shawarma) chicken (taouk, shawarma), liver, kidney, fish		1	2	99
C3.2F	Group 5: Eggs		1	2	99
C3.2G	Group 6: Vitamin A fruits and vegetables e.g. carrots, dark leafy greens (hindbeh, siliq, spinach), winter squash (laqteen), dried apricots, cantaloupe melon,		1	2	99
C3.2H	Group 7: Other fruits and vegetables e.g. tomatoes, citrus fruits, bananas, apples, cabbage, onions, eggplant, mouloukiyya, watermelon		1	2	99
C3.2I	Others (not counted in the dietary diversity score)		1	2	99
	Any sugary foods, such as chocolates, sweets, candies, pastries, cakes or biscuits				
	Any baby cereal or baby food enriched? (Cerelac, Farlaz, Sahha, Oatmeal)?		1	2	99
	Any Plumpy' products such as Plumpy'Nut, Plumpy'Sup (Show picture / sachet)				

C3.3	How many times did (name) eat solid, semi-solid or soft foods yesterday during the day or at night?	0	0	
		1	1	
		2	2	
		3	3	
		4 or more	4	
		Don't know/don't remember	88	
C3.4	Is it difficult for you to feed (name) a variety of different types of foods each day?	Yes	1	
		Maybe	2	
		No	3	□ C3.6
C3.5	Can you tell me the reasons why it is difficult? Select all that are named	Food prices	1	
		Food availability	2	
		Lack of money to buy	3	
		Market too far away	4	

		Market too dangerous Lack of foods for young children in food basket Other, specify:_____	5 6 0	
C3.6	Is it difficult for you to wash your hands with soap before feeding a child?	Yes Maybe No	1 2 3	 □ C4
C3.7	Can you tell me the reasons why it is difficult?	Lack of soap Lack of water Cold weather Long distance to water point Lack of water storage at home Other, specify:_____	1 2 3 4 5 0	
MODULE C4: ARTIFICIAL FEEDING				
CHECK C3.2 – did child receive infant formula yesterday?		Yes No Don't Know	1 2 3	 □. C5 □. C5
SAY: You mentioned that (name) was given infant formula yesterday. I would now like to ask you some more questions about this.				
C4.1	What is the reason that (NAME) was given infant formula yesterday? Select all that are mentioned	Baby is not breastfed (at all) Advice from a health worker (doctor, midwife, CHW) Advice from family member Breastfeeding difficulties (pain, not enough milk etc.) Baby – not gaining enough weight Illness – baby sick Illness – mother sick /taking medicine Mother - too tired/stressed Mother – working Mother – absent (long term) Mother – too busy (lack of time) Helps baby sleep Baby crying Baby not satisfied/breastmilk not enough Lack of privacy to BF Infant formula is good for baby Other, specify:_____	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 0	
C4.2	How did you get the infant formula that you fed (NAME) yesterday?	Bought it / paid for it Donation from a charity / NGO Donation from camp management Included in food basket / GFD Local council Given by a friend Given by a health worker Other, specify:_____	1 2 3 4 5 6 7 0	
C4.3	Last time you prepared infant formula for (NAME), did you measure the water according to the instructions on the tin? Note: caregivers may also use liquids other than water. Explain this in "other"	Yes No Don't know / Don't remember Not applicable (RUIF)	1 2 88 100	□ C4.5 □ C4.5 □ C4.5
C4.4	What did you do differently than the instructions?	Added more water Added less water Did not measure water Not sure Other, specify:_____	1 2 3 4 0	
C4.5	In your opinion, how important for your (NAME)'s health is it to follow the label's preparation instructions?	Very important Fairly important Not important Don't know	1 2 3 88	
C4.6	When you feed (NAME) infant formula on a normal day, what do you usually do with any remaining formula?	Keep it (room temperature) Keep it (refrigerated) Throw it away Make sure baby finishes all Give to other family member / drink it myself	1 2 3 4 5	

		Other, specify:_____	0	
MODULE C5 BOTTLES AND CUPS				
C5.1	Yesterday, during the day or at night, did (NAME) drink anything from a bottle with a nipple?	Yes No Don't know / don't remember	1 2 88	 □ C5.3 □ C5.3
C5.2	In the past 2 weeks, what are the different ways you might have cleaned (NAME)'s bottle before using it again? Prompt: Any other ways? Select all that are mentioned	Rinsed with water only Washed by hand with soap Boiled or sterilised Not cleaned between uses Other, specify:_____	1 2 3 4 0	
C5.3	Do you think that (NAME) could get diarrhoea from using a bottle?	Yes Maybe No Don't know	1 2 3 88	
C5.4	How serious do you think it is if (NAME) gets diarrhoea?	Very serious Somewhat serious Not serious	1 2 3	
C5.5	Did (NAME) drink anything from an open cup yesterday during the day or at night?	Yes No Don't know / Don't remember	1 2 88	
C5.6	Is it difficult to feed (NAME) liquids from a cup?	Yes Maybe No	1 2 3	
MODULE D - CAREGIVERS OF CHILDREN 0 – 23 MONTHS, AGED BETWEEN 15 – 49 YEARS				
MODULE D1: MATERNAL NUTRITION				
D1.1	How many meals did you eat yesterday during the day or at night?	1 2 3 4 or more	1 2 3 4	 □ D1.3 □ D1.3
D1.2	What is the reason you ate less than 3 meals yesterday?	Lack of food Lack of time (busy) It is not important to eat 3 meals Other _____	1 2 3 0	
D1.3	How important do you think it is to eat more food during pregnancy and while breastfeeding? 1 extra serving during pregnancy / when breastfeeding	Very important Somewhat important Not important	1 2 3	
D1.4	Is it difficult for you to eat more food than usual during pregnancy or breastfeeding? (quantity	Yes Maybe No	1 2 3	 □ D1.6
D1.5	What are the reasons it is difficult for you to eat more? Select all that are mentioned	Food prices Lack of availability Lack of money to buy Market too far away Market too dangerous Not included in food basket Given to other family members Mother feels unwell or nauseous Other, specify:_____	1 2 3 4 5 6 7 8 0	
D1.6	Have you ever heard about anaemia?	Yes No	1 2	
D1.7	Anaemia is caused by low consumption of iron. Many foods contain iron; can you name some foods that contain iron?	Organ Meat e.g. liver Flesh meat e.g. beef, chicken Sardines Dates Dried fruits e.g. apricots, raisins Legumes e.g. chickpeas, beans Canned tomato paste Carob molasses Green leafy vegetables Halaweh or tahini Fortified foods I don't know Other, specify:_____	1 2 3 4 5 6 7 8 9 10 11 88 0	

D1.8	In the past 30 days, has there been a lack of food in your household?	Yes No Don't know / don't remember	1 2 88	 ▭ END ▭ END
D1.09	During the last 7 days, how many days did your household restrict consumption by adults in order for small children to eat?	Not applied 1 day 2 days 3 days 4 days 5 days 6 days Every day	00 1 2 3 4 5 6 7	