Ministry of Public Health and Population

Save the Children

Nutrition and Mortality Assessment Report

Emergency WASH & Nutrition for conflict affected people in Yemen – Taiz governorate

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ACRONYMS

BF	Breastfeeding.
CI	Confidence Interval.
CDR	Crude Death Rate.
CSO	Central Statistical Organization.
ENA	Emergency Nutrition Assessment.
GAM	Global Acute Malnutrition.
HAZ	Height-for-Age-Z score.
HHs	Households.
IDP	Internal Displacement population
IYCFP	Infant & Young Children Feeding Practices.
MAD	Minimum Acceptable Diet.
MAM	Moderate Acute Malnutrition.
MDD	Minimum Dietary Diversity.
MMF	Minimum Meal Frequency.
MUAC	Mid Upper Arm Circumference.
S.D	Standard Deviation.
SAM	Sever Acute Malnutrition.
SDGs	Sustainable Development Goals.
SMART	Standardized Monitoring & Assessment for Relief & Transition.
TG	Taiz Governorate
THL	Taiz Highland.
U5	Children Under the age of five years
U5DR	Under Five Death Rate.
UNICEF	United Nation Children's Fund.
WAZ	Weight-for-Age-Z score.
WHO	World Health Organization.
WHZ	Weight-for-Height-Z score.
YHRP	Yemen Humanitarian Response Plan,
YNHDS	The Yemeni National Health Demographic survey.

DEFINITION OF TERMS

EBF	Proportion of infants 0–5 months of age who are fed exclusively with breast milk
CDR	Number of people in the total population who die over a specified period of time.
Continued breastfeeding at 1 year	Proportion of children 12–15 months of age who are fed breast milk.
Early Initiation of BF	Proportion of children born in the last 24 months who were put to the breast within one hour of birth.
HH	A group people dwelling within the same compound or unit eating from the same pot
MAD	Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk).
MDD	Proportion of children 6–23 months of age who receive foods from 4 or more food groups.
MMF	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.
U5DR	Number of children aged from birth to 5 years who die over a specified period of time in relation to the total number of children below 5 years of age in the population

EXECUTIVE SUMMARY

This report presents findings from a survey conducted by Save the Children (SC) in Taiz Governorate from 18 to 30 March 2017. The Standardized Monitoring & Assessments of Reliefs & Transitions (SMART) methodology was used. The survey was conducted in 7 accessible districts in Taiz Highland (THL) zone. Surveyed districts were AL-Mawaset, Samea, Al-Selw, Al-Misrakh, Saber Al-Mawadem, Khadeer and Al-Maafer. A two-staged cross sectional survey was conducted. The study population in the seven districts was 571,889 people living in 345 villages. A total of 563 households (HHs) and 624 U5 children were enumerated. The survey aimed to determine the nutritional status of U5 children, IYCF practices and crude mortality rate in the study population.

Prevalence of Malnutrition

Indicator		**Prevalence as a percentage (95% CI)**
Global Acute Malnutrition, WHZ	(<-2s.d.)	11.3 (8.7 – 14.5)
Stunting, HAZ	(<-2s.d.)	51.4 (44.2 – 58.6)
Underweight, WAZ	(<-2s.d.)	39.2 (34.0 – 44.7)

A few indicators on Infant and Young Child Feeding were explored. Early initiation of breastfeeding in the surveyed population was found to be 36% that is to say only one in every three newly born infants was receiving breastmilk within the first hour of birth. Exclusive breastfeeding rate in the population was found to be 41% thus one in every two infants aged 0 to 6 months were receiving exclusively breastmilk and nothing else from birth to 6 months. The proportion of children 12 to 15 months of age who were still receiving breastmilk at the time of the assessment was 66%. The proportion of young children who were receiving a diet with minimum diversity (minimum dietary diversity) was 9.2%, thus one in every 10 children aged 6 to 23 months old were receiving a diet of minimum quality (at least four food groups per day).

The crude death rate (CDR) is defined as the number of people in the total population who die over a specified period of time[1]. Crude death rate (CDR) was assessed for a period of 90 days prior to the survey dates. CDR was found to be 0.09 deaths/ 10,000 people/ day. Similarly U5 death date is defined as the number of children aged from birth to 5 years who die over a specified period of time in relation to the total number of children below 5 years of age in the population (based on the SMART methodology, April 2006). U5 death rate (all-cause mortality) was found to be 0.19 deaths/10000 children under five/ day for the same recall period as CDR.

The poor IYCF practices are a contributing factor high malnutrition rates in THL zone. There is need to support optimal IYCF practices, provide lifesaving interventions to support and manage acute malnutrition and provide preventative services to curb further deterioration of the current situation. It is well documented that malnutrition is the major underlying factor for 35 and 55 percent of all childhood deaths, and this situation is worse during emergencies[2].

[1] Measuring Mortality, Nutritional Status, and Food Security in Crisis Situations: SMART METHODOLOGY, April 2006
[2] http://www.who.int/mediacentre/factsheets/fs178/en/

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INTRODUCTION

Background

Save the Children (SC) has been implementing humanitarian and development programs in Yemen since 1963. SC has a country office located in Sana'a and three Area Offices in the north (Hodeidah), centre (Sana'a) and south (Aden) of the country. SC is currently operational in 8 out of Yemen's 22 governorates: In the North Area – Sa'ada, Hodeidah and Hajjah; In the Centre Area –Sana'a and Amran; in the South Area – Taiz, Aden and Lahj. SC implements programmes in six different technical areas; child protection and child rights' governance, education, health, nutrition, water sanitation and hygiene (WASH) and food security and livelihoods.

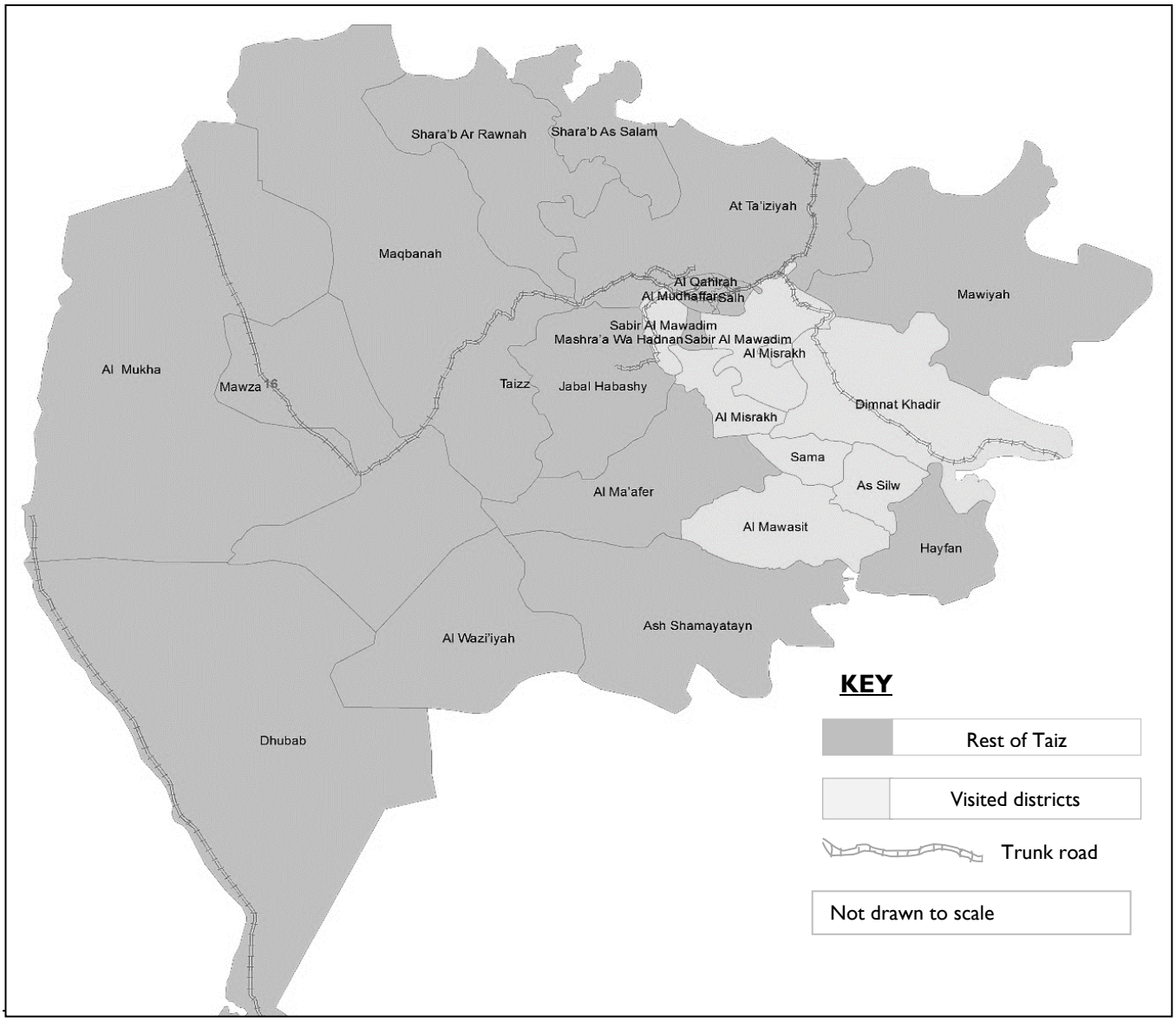
Yemen is the poorest country in the Middle East and ranks 154 of 187 countries on the Human Development Index[3]. High levels of poverty, poor education and poor health outcomes have been worsened by the protracted conflict that began in March 2015 and still rages on. In March 2017 seven out of the 22 governorates in Yemen were classified to be in IPC phase 4 (an emergency level) of food insecurity. Taiz was one of the seven governorates IPC classified to be in this emergency phase. An estimated 17 million people, which is equivalent to 60% of the total Yemeni population, were reported to be food insecure and requiring urgent humanitarian assistance to save lives and protect livelihoods[4].

Taiz Governorate is located in the southwestern part of the Republic of Yemen, bordering the Red Sea to the west, AL-Hodaidah and Ibb governorates to the north, Lahj governorate to the south, and Al-Dhale governorate to the east. Its surface area is about 10462 km2. Taiz is Yemen's most populous governorate, with an estimated 3,116,000 people–11.3% of the country's population (2016 population projection based on 2004 census)[5]. About 81% of the population is rural while 19% is urban; 46.7% is male and 53.3% is female. Taiz's population

[3] OCHA, Yemen humanitarian response plan 2013
[4] Integrated Food Security Phase Classification-IPC March 2017
[5] Central Statistical Organization (CSO). Population Projection Based on 2004 Census. Yemen

growth rate is 2.47%. Current population density is estimated at 298 inhabitants per square kilometer[6]. Administratively Taiz is divided into 23 districts. Table below shows the districts by settlement. The Map below illustrates the position of visited districts among the other districts in Taiz governorate.

Figure 1: Map of Taiz governorate showing visited districts in relation to other districts



[6] Central Statistical Organization (CSO). Population Projection Based on 2004 Census. Yemen.

Table 1: List of districts in Taiz governorate by settlement type

Settlement Type	District	
Urban	Muzaffar Qahera Salah	
Rural	Al Taziha Saber Al Moadm Mashra'a Hdnan Al Msrakh Jabal Habashi Mawasit Al Maafr Ashammaitin Mauza'a Mawiah	Al Wazeia Al Makha Dhubab Maqbana Sharhab Al Rawna Sharhab Al Salam Khadder Same'a Aselow Hiffan

Taiz governorate is made up of two ecological zones, namely the Mountainous Zone or Highland Zone and the Lowland Coastal Plain or just the Lowland Zone. Although the governorate is characterized by diverse economic activity, the population's characteristics and living conditions differ significantly between the two ecological zones. People in the highland area engage mostly in farming, cultivating crops such as grains, vegetables, Qat and fruits as well as livestock and industry.

Taiz governorate is a heavily contested governorate among the warring parties. Many of the districts in Taiz have active fighting making them difficult to access for humanitarian workers. Taiz has the highest number of Internally Displaced Persons (IDPs) according to the latest reports from the Task Force on Population Movement.

Objectives of the assessment

Overall Objective:

- To assess the nutritional status of the children aged 6 to 59 months old, IYCF practices and mortality rates in SC supported districts (see table 1 above)

Specific Objectives:

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

ii. To determine the prevalence of chronic malnutrition among children aged 6 – 59 months
iii. To estimate the crude death rate and U5 death rates.
iv. To assess IYCF Practices among children less than 0 – 23 months
v. To estimate the prevalence of U5 morbidity (diarrhoea, acute respiratory illnesses, and fever).
vi. To estimate the vaccination coverage of Penta3, Measles and Vitamin A supplementation among the 6 – 59 months children in the past 6 months
vii. To assess household WASH practices

Justification

Due to the current protracted conflict and widespread displacements, it is a good practice and recommended to frequently monitor the prevalence of acute malnutrition. This assessment will be carried as part of a plan to measure the prevalence of malnutrition. The data obtained from this assessment will be used to inform nutrition programming, for example in calculating caseloads for acute malnutrition management and many other needs.

METHODOLOGY

Study design

A two-staged cluster cross sectional survey was conducted from 18 to 30 March 2017. The methods used, including sampling and sample size determination followed the Standardized Monitoring & Assessment of Relief & Transition (SMART) methodology[7]. The survey was conducted in 7 districts in Taiz Highland (THL) zone out of the 16 possible districts. Districts covered were AL-Mawaset, Samea, Al-Selw, Al-Misrakh, Saber Al-Mawadem, Khadeer and Al-Maafer.

Study population

[7] SMART, Action Against Hunger-Canada, and Technical Advisory Group. (2012) Sampling Methods and Sample Size Calculation for the SMART Methodology

The total population from the 7 districts was estimated to be 571,889 people living in 20 Ozla (sub district) and 345 villages. All the households residing in Taiz at the time of assessment were eligible to be included.

Sample size calculation

ENA software was used to calculate the minimum number of HHs to be visited to obtain a statistically significant results (5% level of significance). Three sample sizes were calculated for the purpose of this survey. Sample size for anthropometric estimates, sample size for mortality estimates and sample size for IYCF indicators estimates. The largest of the three sample sizes was chosen as the number of units to be enumerated (sample size calculated based on IYCF indicators). All households reached during enumeration ere included for mortality assessment. The sample size calculated for IYCF indicators was the highest and was considered as the sample size for the assessment. The calculated sample sizes for anthropometric, mortality and IYCF indicators and the parameters used during the calculations are shown in tables below. The formula used to determine IYCF sample size is shown below.

$$n = \frac{\left(\frac{Nz^2pq}{d^2(N-1)+z^2pq}\right) \times DE}{c}$$

Where:

n	Is the calculated sample size
N	The target population (68303)
z^2	Type I error (using 95% confidence level the type I error was taken to be 5% (a z-value of 1.96)
p	Proportion of an indicator of interest being evaluated, mdd at 50%
q	1 – p
d^2	Precision, a precision of 0.05 was used
DE	Design effect, DE of 1.5 was used
c	the average HH size multiplied by the expected proportion of under 2 years children among under-fives and the proportion of under-fives in population (7*0.18*0.4)

Table 2: Parameters used in the Sample Size Determination: Based on anthropometric indicators

Parameters for Anthropometry	**Value**
Estimated Prevalence of GAM (%)	14.5

± Desired precision (%)	3.5
Design Effect (n)	1.0
Children to be included (n)	**423**
Average HH Size n (n)	7.4
% Children under-5	18.4
% Non-response Households	3.0
Households to be included	**356**

Table 3: Parameters used in the Sample Size Determination: Based on mortality indicators

Parameters for Mortality	**Value**
Estimated Death Rate /10,000/day	0.3
± Desired precision /10,000/day	0.3
Design Effect (if applicable)	1.0
Recall Period in days	90
Population to be included	1,446
Average HH Size	7.4
% Non-response Households	3.0
Households to be included	**201**

Table 4: Parameters used in the Sample Size Determination: Based on IYCF Indicators

Parameters for IYCF	**Value**
Estimated Prevalence of MAD (%)	13.0
± Desired precision (%)	5.0
Design Effect (%)	1.5
Children to be included (0 – 23months)	**284**
Average HH Size (n)	7.4
% Children under-5	18.4
Proportion of 0-23months among U5 (%)	40.0
% Non-response Households	3.0
Households to be included	**542**

A total of 542 HHs was adopted as the sample size for the assessment because it was the highest among the calculated sample sizes.

Sampling Procedure

The assessment had two stages of sampling, in the first stage 30 villages were selected (a village represented a cluster). The villages to be visited were selected randomly using probability Proportional to Population Size (PPS) embedded in the ENA software. A total of 345 villages with their corresponding population sizes were entered onto ENA and 30 clusters (villages) were drawn randomly according to PPS. The number of villages sampled from each district is shown in table below:

Table 5: Number of villages sampled from each district and corresponding district population size

No.	Geographical unit (7 districts within TAIZ)	Population size	# of villages	# of Cluster Selected	Reserved
1	AL-Mawaset	119,769	83	7	0
2	Sameaa	57,093	35	2	1
3	Al-Selw	18,833	17	2	0
4	Al-Misrakh	73,548	38	4	0
5	Saber Al-Mawadem	49,232	28	2	1
6	Khadeer	141,982	75	7	1
7	Al-Maafer	111,426	69	6	1
	Total	**571,883**	**345**	**30**	**4**

In the second stage of sampling, simple random sampling (SRS) was used to select HHs. An updated list of HHs was obtained from the village leaders and in some cases from a list was constructed in the village with the help of a respectable key informant from the local village involved. Each listed household was then assigned a number and the team leader wrote the numbers on small separate papers. The small papers were put in a hat and a number was picked randomly from the hat. A number (small piece of paper) was picked with replacement after reshuffling. Numbers were picked with replacement until the team had a total of 18HHs.

Data collection instrument

Data was collected on hard copy questionnaires of semi-structured questions. An adult who could give consent (adult above 18 years of age) was the one permitted to respond. Mortality data was collected from all the selected households, irrespective of presence or absence of children under the age of five years. A recall period of 90 days was used for collecting mortality data. For child anthropometric data, weight in kilograms was measured using electronic SECA scale from UNICEF that had a tarring function "mother-baby function". Weight was taken for children wearing light clothes (excess clothes were removed such as pants or sweaters). Children less than two years of age were measured length (lying down) and those two years and above were measure height. Height was measured in cm using the standard height board from UNICEF. MUAC was measured using MUAC in cm using the standard colour coded MUAC tap from UNICEF. During data collection there was no stratification of any kind that was employed.

Training of enumerators

Enumerators attended a 7 days training on questionnaire administration and instruments calibration including role plays and field pretesting exercise. The survey had 5 teams of 4 members; 1 team leader, 3 data collectors (1 male and 3 females).The purpose of the training was to standardize the way questions were asked and the way data was recorded during data collection. Common mistakes were highlighted to minimize interviewer and or recall bias. The training also emphasized and capacitated enumerators on ethics during assessments and the expected code of conduct.

Data management

During data collection and data entry date of births were recorded as provided by the mother, some dates came in Hijri calendar and some in Gregorian calendar format. Enumerators recorded the dates as provided, after data entry web based dates converters were used to convert from Hijri to Gregorian calendar format.

Data was entered onto an excel data base. Data was transferred into ENA[8] for analysing anthropometric and mortality data. IYCF data was exported to SPSS for analysis. In SPSS, frequencies and cross-tabulations were used to give percentages, means and standard deviations in the descriptive analysis and presentation of general household and child characteristics. Significances was defined as ($p>0.05$). The classification the nutritional status using the above indices as well as MUAC was made following the WHO classification. Statistical test for difference between two samples were carried out using test for proportions with the assumption of equal variance.

Plausibility

Anthropometric data collected during the assessment was of high quality as reflected by the plausibility checks (appendix 1) that were conducted on the data. Plausibility checks are conducted to assess the trustworthiness of the data as source of inference on the population of interest. During plausibility checks double entry of records, digit preference, selection bias (age group and sex rations are assessed), the normality of HAZ, WAZ and WHZ scores and according to HAZ, WAZ and WHZ outlying entries. There were no double entries detected in the data set. The overall sex ratio (ratio boys/girls) equals was 1.1 with p-value = 0.119 (so, boys and girls equally represented). Percentage of values flagged with SMART flags: WHZ: 0.2 %, HAZ: 0.9 %, WAZ: 0.2 %. Age ratio of 6-29 months to 30-59 months: 0.81 (The value should be around 0.85) p-value = 0.572 (as expected).

[8] ENA for SMART (ENA 2011 version July, 9th 2015)

RESULTS

Demographics

A total of 563 HHs were interviewed during the assessment. The average HH size (mean) was 7 individuals. 6% of the interviewed HHs were headed by females. Table below illustrates demographic variables for the interviewed HHs.

Table 6: Demographic characteristics of the interviewed HHs

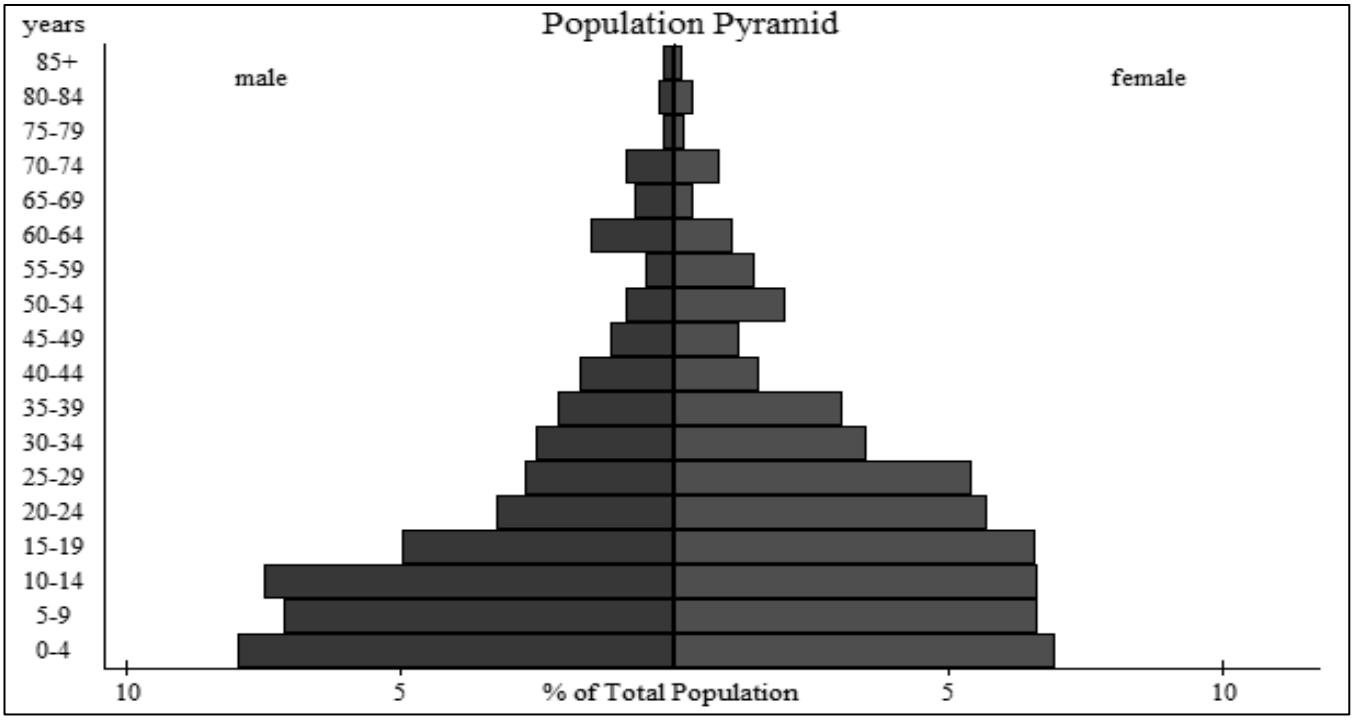
Characteristic		**Count n (%)**
Mean Household size		6.9
Mean No. of U5 children		1.1
Household head gender	Man	520 (93.9)
	Woman	34 (6.1)
Household caretaker gender	Man	11 (2.0)
	Woman	543 (98.0)
Household caretaker Marital status	Married	493 (89)
	Widowed	47 (8.5)
	Divorced	6 (1.1)
	Recalcitrant	1 (0.2)
	Single	7 (1.3)
Household caretaker educational level	Illiterate	324 (58.5)
	Read and write	25 (4.5)
	Basic education	114 (20.6)
	Secondary education	67 (12.1)
	Higher education	24 (4.3)
Household caretaker educational status	Illiterate	383 (69.1)
	Literate	171 (30.9)

The overall sex ratio for the assessment was 1.1 Boys to Girls thus there was equal representation of boys and girls in the assessment. Table below illustrates the sex ratio of boys to girls in different age groups.

Table 7: Sex ratio of boys to girls among children from the surveyed HHs by age group

Age group	Boys n (%)	Girls n (%)	Total n (%)	Ratio;Boy: Girl
6-17 months	67 (54.0)	57 (46.0)	124 (22.0)	1.2
18-29 months	66 (51.6)	62 (48.4)	128 (22.7)	1.1
30-41 months	83 (59.3)	57 (40.7)	140 (24.9)	1.5
42-53 months	54 (46.6)	62 (53.4)	116 (20.6)	0.9
54-59 months	30 (54.5)	25 (45.5)	55 (9.8)	1.2
Total	300 (53.3)	263 (46.7)	563 (100)	1.1

Figure 2: The age gender structure of the interviewed HHs as a population pyramid



Malnutrition rates

During the survey the nutrition status of children 6 to 59 months old was determined. Indices including stunting rates, acute malnutrition rates and prevalence of undernutrition were explored. Stunting was defined as height for age z-score (HAZ) of less than -2SD. Children with HAZ of less than -3SD were classified as severely stunted. Children who had a weight for height z-score (WHZ) of less than -3SD or had oedema were classified as having severe acute malnutrition (SAM). Children with WHZ of less than -2SD and more than -3SD were classified as having moderate acute malnutrition (MAM). A summary measure of all the

children who had acute malnutrition WHZ of less than -2SD (SAM and MAM children) was also explored known as Global Acute Malnutrition (GAM). Children who had a weight for age z scores (WAZ) of -2SD were classified as being underweight. All the indices on malnutrition were classified using WHO 2006 growth standards.

Table 8: Prevalence of stunting by level and sex (SMART flags)

stunting level	**Boys n=297 (95% CI)**	**Girls n=257 (95% CI)**	**Combined n=554 (95% CI)**
stunting (HAZ <-2SD)	51.5 (43.8 - 59.1)	51.4 (42.8 - 59.8)	51.4 (44.2 - 58.6)
moderate stunting (HAZ >=-3SD and <-2SD)	30.6 (25.5 - 36.4)	33.1 (27.6 - 39.0)	31.8 (27.8 - 36.0)
severe stunting (HAZ <-3SD)	20.9 (15.2 - 27.9)	18.3 (11.6 - 27.7)	19.7 (14.2 - 26.6)

Table 9: Prevalence of acute malnutrition using WHZ scores & or oedema for classification by sex

Acute malnutrition level	**Boys n=298 (95% CI)**	**Girls n=260 (95% CI)**	**Combined n=558 (95% CI)**
GAM (WHZ <-2SD & or oedema)	14.1 (10.0 – 19.4)	8.1 (5.1 – 12.5)	11.3 (8.7 - 14.5)
SAM (WHZ <-3SD & or oedema)	1.7 (0.6 – 4.6)	0.8 (0.2 – 3.1)	1.3 (0.6 – 2.7)
MAM (WHZ >=-3SD and <-2SD)	12.4 (8.5 – 17.9)	7.3 (4.5 – 11.7)	10.0 (7.5 13.2)

Table 10: Prevalence of acute malnutrition using MUAC & or oedema for classification by sex

Acute malnutrition level	**Boys n=300 (95% CI)**	**Girls n=263 (95% CI)**	**Combined n=563 (95% CI)**
GAM (MUAC<125mm & or oedema)	5.7 (3.7 – 8.6)	5.7 (3.5 – 9.2	5.7 (4.0 – 8.0)
SAM (MUAC<115mm & or oedema)	1.0 (0.3 – 3.1)	1.5 (0.6 – 3.8)	1.2 (0.6 – 2.7)
MAM (MUAC >=115mm and <125mm)	4.7 (2.9 – 7.4)	4.2 (2.4 – 7.3)	4.4 (3.1 – 6.4)

Table 11: Prevalence of underweight based on WAZ by sex

Underweight level	**Boys n=298 (95% CI)**	**Girls n=260 (95% CI)**	**Combined n=558 (95% CI)**
Underweight (WAZ <-2SD)	41.4 (34.7 – 48.9)	36.5 (29.6 – 44.1)	39.2 (34.0 – 44.7)

Moderate underweight (WAZ >=-3SD & <-2SD)	29.2 (22.8 – 36.5)	28.8 (23.7 – 34.6)	29.0 (25.5 – 32.9)
Severe underweight (WAZ <-3SD)	12.4 (8.3 – 18.1)	7.7 (4.8 – 12.0)	10.2 (7.3 – 14.1)

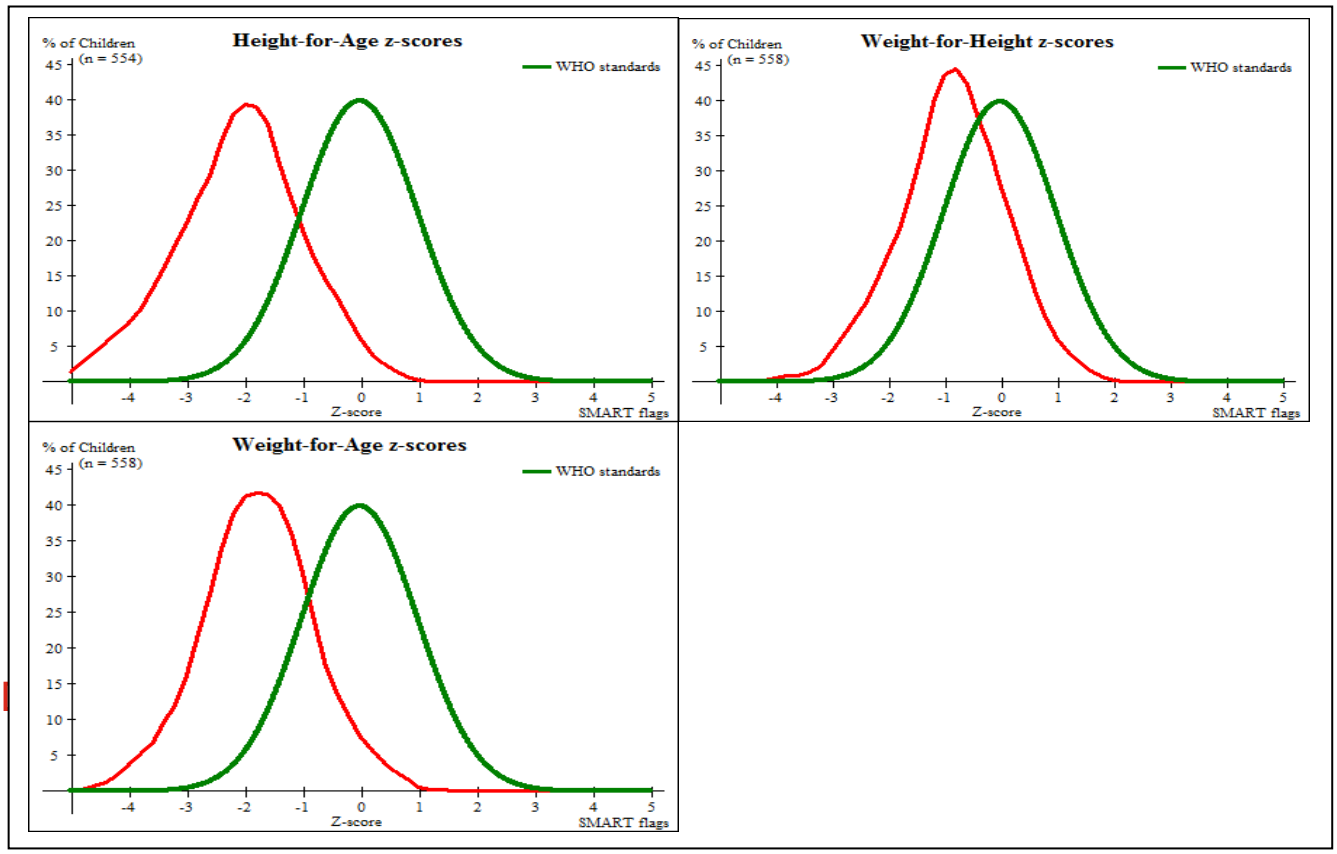
The difference in stunting (<-2SD) prevalence across sex was statistically insignificant (p=0.98). The overall stunting prevalence among children from all the interviewed HHs was 51.4%. Figure below illustrates the distribution of all the observed HAZ scores in comparison with the WHO 2006 growth standards. According to the Shapiro – Wilk test the observed HAZ distribution was normal (p= 0.062). The difference in GAM across sex (table above) was statistically significant (p=0.025). Figure below illustrates the observed WHZ scores in comparison to WHO 2006 growth standards. According to the Shapiro – Wilk test, the observed WHZ score were normally distributed (p=0.264). The difference in the prevalence of underweight between boys and girls aged 6 to 59 months from the interviewed HHs was statistically insignificant (p=0.237). According to the Shapiro – Wilk test the observed WAZ distribution was normal (p= 0.773). During the assessment no oedematous children were identified among the sampled HHs.

Mortality

The crude death rate (CDR), is defined as the number of people in the total population who die over a specified period of time. The CDR for the seven interviewed districts in Taiz was 0.09 deaths per 10,000 people per day (95% CI: 0.0 – 0.27) for the 3 months prior to the assessment.

For this survey U5 death rate (number of children aged from birth to 5 years who die over a specified period of time in relation to the total number of children below 5 years of age in the population) . The U5 death rate for the 3 months prior to the assessment was 0.19 deaths per 10,000 people per day (95% CI: 0.02 – 0.46).

Figure 3: Distribution of HAZ, WAZ and WHZ scores overlaid by the WHO 2006 growth standards normal curves



Child Morbidity

The proportion of children who fell ill two weeks prior to the assessment was also determined. Illnesses that were explored are diarrhoea, cough and fever. The proportion of children that reported having fallen ill from the three diseases two weeks prior to the assessment are presented in table below.

Table 12: Child morbidity profile two weeks prior to the assessment

Ailment	**proportion n=621 (95% CI)**
Never ill (from diarrhoea, cough or fever)	58.1 (54.2 – 62.0)
Diarrhoea	28.9 (25.4 – 32.6)
Cough or breathing difficulty	28.2 (24.8 – 31.9)
Fever	42.5 (38.6 – 46.5)

Vaccinations and Vitamin A supplementation

The proportion of children who received their due vaccinations on measles, polio and vitamin A supplementation were assessed. 90.3% (95% CI 87.6% to 92.5%) of children aged 6 to 59 months received their due vitamin A doses at the recommended time for a period 6 months. 48.7% of children aged 9 to 59 months were confirmed (from the child health cards) to have received their measles vaccination during the assessment. Using verbal confirmation from the caregiver, 87.6% (95% CI 84.6% to 90.2%) of the children aged 9 to 59 months were reported to have their measles vaccination up to date. 51.2% (95% CI : 47.0% to 55.3%) of all the assessed children were confirmed (from the child health card) to have received pentavalent3 or polio3. Using verbal confirmation from the caregiver, 89.7% (95% CI: 86.8% to 91.9%) of the children aged between 9 and 59 months were reported that their pentavalent3/polio3 vaccination was up to date.

Infant and Young Child Feeding Practices

A total of 243 children aged 0 to 24 months were assessed. Explored IYCF indicators include early initiation, Exclusive breastfeeding (EBF) which is defined as the proportion of infants 0–5 months of age who are fed exclusively on breast-milk, continued breastfeeding defined as the proportion of children 12–15 months of age who are continue to receive breast-milk, minimum dietary diversity (MDD) defined as the proportion of children 6–23 months of age who receive foods from 4 or more food groups, and minimum meal frequency (MMF) defined as the proportion of children 6–23 months of age who receive solid, semi-solid, or soft foods the minimum (recommended) number of times and minimum acceptable diet (MAD) defined as the proportion of children 6–23 months of age who receive a minimum adequate diet for the recommended number of times a day.

Table 13: IYCF indicators for the interviewed HHs

IYCFP Indicator		proportion (95% CI)
1	Early initiation of breastfeeding (n=243)	36.2 (30.2 – 42.6)
2	Exclusive breastfeeding under 6 months(n=58)	41.4 (28.6 – 55.1)
3	Continued breastfeeding at 1 year(n=38)	65.8 (48.6 – 80.4)
4	Minimum dietary diversity(MDD)(n=185)	9.2 (5.5 – 14.3)
5	Minimum meal frequency(MMF))n=185)	42.2 (35.0 – 49.6)
6	Minimum acceptable diet(MAD)(n=185)	3.8 (1.5 – 7.6)

WASH situation

All the HHs that were visited during the survey were interviewed for WASH practices. Major sources of drinking water, toilet facilities and handwashing practises were assessed. The proportion of HHs accessing water from improved sources was 68%. Improved sources of drinking water Include piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, and rainwater. Table 14 presents information on major WASH indicators.

Table 14: WASH situation within Interviewed HHs

Variable		Number (%)	
Main drinking water source for (N=554)	Water from unprotected well	138	(24.9)
	Water network connected to House.	118	(21.3)
	Water from covered well	117	(21.1)
	Water tanker(waitate)	77	(13.9)
	Rainwater (collected to protected containers, etc.)	34	(6.1)
	Water from unprotected spring	32	(5.8)
	drilled well	28	(5.1)
	Water from protected spring	5	(0.9)
	Community water supply point (Sabeel)	2	(0.4)
	Surface water (Wadi, springs, etc.)	2	(0.4)
	Bottled water(minerals or kawthar)	1	(0.2)
Water treatment methods(n=552)	Do nothing	540	(97.8)
	Boiling	4	(0.7)
	Chlorination	1	(0.2)
	Filtering with clothes	3	(0.5)
	Ceramic/ sand filters	2	(0.4)
	Alum	2	(0.4)

HHs Latrine(n=554)	siphon or bucket to a covered pit	317	(57.2)
	siphon or bucket to the outdoors	139	(25.1)
	siphon or bucket into a toilet bowl	43	(7.8)
	Pit toilet without board / not covered	19	(3.4)
	siphon or bucket into the public sewer	11	(2.0)
	Defecating in the open (in the fields, for example, etc.)	10	(1.8)
	An improved toilet hole ventilated	9	(1.6)
	siphon or bucket to an unknown place	3	(0.5)
	A toilet hole covered with a board	3	(0.5)
Hand washing practice by HH caretaker(n=554)	Before meal	396	(71.5)
	Before cooking	339	(61.2)
	After toilet	268	(48.4)

The most common source of drinking water was from unprotected wells, 24.9% of the interviewed HHs were obtaining their drinking water from unprotected wells. Treatment of water before drinking was not a common practice, only 2.2% of the interviewed HHs were treating their drinking water before use. Among the interviewed HHs 85.6% were storing their water in clean containers. 48.4% of the interviewed HHs were practicing handwashing after toilet use.

DISCUSSION

The survey results indicated that the nutrition situation is poor in the 7 districts that were covered in this survey. Global acute malnutrition was 11.3%. According to the WHO classification of GAM, the nutrition situation in this area is categorised as "serious" (prevalence between 10% and 14%)[9] which requires urgent lifesaving interventions. With such level of acute malnutrition there is need to ensure continued support for implementation of interventions to improve access to acute malnutrition treatment services for children 6-59 months. The most recent survey that was carried out in this area indicated GAM was 14.5%. The level of stunting observed falls within the very high (HAZ ←2SD above 40%) or critical category according to WHO[8]. Thus the survey area has a double burden of malnutrition with high levels chronic malnutrition and at the same time high levels of acute malnutrition. Though this cannot be addressed through short term intervention it shows that the problem of malnutrition is chronic and in addition to the emergency programming there is need to design intervention to address chronic malnutrition.

IYCF practices were also assessed during the assessment. The proportion of infants who were initiated early to breastfeeding (within the first hour of being born) among the assessed infants under the age of six months was 36.2% and the rate of EBF was found to be 41.4%. Though early initiation and EBF were relatively higher than the national average, there should be interventions to promote, protect and support these practices. As indicated earlier (Table 13), all other IYCF practices e.g. MAD. MDD are suboptimal and interventions should be supported to improve these practices among caregivers of children 0-23 months in the project area. Optimal IYCF practices are a key lifesaving intervention during emergencies and can contribute to prevention of malnutrition among children o-23 months.

[9] http://www.who.int/nutgrowthdb/about/introduction/en/index5.html

The CDR (total deaths/10,000 people / day) during this assessment was found to be at 0.09 (0.03 -0.27, 95% CI) and U5DR (deaths in children under five/10,000 children under five / day) was 0.19 (0.02 – 0.46, 95% CI). These results are below the emergency thresholds for Middle East and North Africa[10]. In 2016 based on the SMART survey conducted by UNICEF, CDR & U5DR were 0.09% & 0.28% respectively.

[10] Sphere 2011

Appendix 1
Plausibility Report:

Plausibility check for: SCI-Yemen, Taiz Survey, March 2017.as

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

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

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5 0	>2.5-5.0 5	>5.0-7.5 10	>7.5 20	**0** (0.2 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1 0	>0.05 2	>0.001 4	<=0.001 10	**0** (p=0.119)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1 0	>0.05 2	>0.001 4	<=0.001 10	**0** (p=0.572)
Dig pref score - weight	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10	**0** (5)
Dig pref score - height	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10	**0** (6)
Dig pref score - MUAC	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10	**0** (5)
Standard Dev WHZ .	Excl	SD	<1.1 and	<1.15 and	<1.20 and	>=1.20 or	
.	Excl	SD	>0.9 0	>0.85 5	>0.80 10	<=0.80 20	**0** (0.94)
Skewness WHZ	Excl	#	<±0.2 0	<±0.4 1	<±0.6 3	>=±0.6 5	**0** (-0.17)
Kurtosis WHZ	Excl	#	<±0.2 0	<±0.4 1	<±0.6 3	>=±0.6 5	**0** (0.09)
Poisson dist WHZ-2	Excl	p	>0.05 0	>0.01 1	>0.001 3	<=0.001 5	**0** (p=0.470)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	**0** %

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

There were no duplicate entries detected.

Percentage of children with no exact birthday: 0 %

Age/Height out of range for WHZ:

HEIGHT:
Line=371/ID=1: 999.90 cm
Line=372/ID=2: 999.90 cm
Line=489/ID=2: 999.90 cm
Line=560/ID=1: 999.90 cm

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

Line=167/ID=1: HAZ (2.831), Age may be incorrect
Line=344/ID=2: HAZ (-5.327), Height may be incorrect
Line=373/ID=1: HAZ (-5.514), Age may be incorrect
Line=417/ID=1: HAZ (-5.801), Age may be incorrect
Line=441/ID=1: WAZ (-5.085), Weight may be incorrect
Line=465/ID=3: HAZ (-5.366), Age may be incorrect
Line=470/ID=1: **WHZ (2.329)**, Height may be incorrect

Percentage of values flagged with SMART flags:WHZ: 0.2 %, HAZ: 0.9 %, WAZ: 0.2 %

Age distribution:

Month 6 : ##
Month 7 : ######
Month 8 : ##########
Month 9 : ##########
Month 10 : ##########
Month 11 : ##########
Month 12 : ##########
Month 13 : ######
Month 14 : ##########
Month 15 : #########
Month 16 : ##########
Month 17 : ##########
Month 18 : ########
Month 19 : ####
Month 20 : #########
Month 21 : ##########
Month 22 : ##########
Month 23 : ##########
Month 24 : #########
Month 25 : ##########
Month 26 : ##########
Month 27 : ##########
Month 28 : #######
Month 29 : ##########
Month 30 : ##########
Month 31 : ########
Month 32 : ##########
Month 33 : ##########
Month 34 : ######
Month 35 : ##########
Month 36 : ##########
Month 37 : #####

Month 38 : ##############
Month 39 : #########
Month 40 : ############
Month 41 : ######
Month 42 : #######
Month 43 : ##############
Month 44 : ##############
Month 45 : #####
Month 46 : ###########
Month 47 : ############
Month 48 : ##############
Month 49 : ####
Month 50 : ##########
Month 51 : ########
Month 52 : #######
Month 53 : ########
Month 54 : ###########
Month 55 : ######
Month 56 : ##############
Month 57 : #########
Month 58 : ################
Month 59 : #####
Month 60 : ##
Age ratio of 6-29 months to 30-59 months: 0.81 (The value should be around 0.85).:
p-value = 0.572 (as expected)

Statistical evaluation of sex and age ratios (using Chi squared statistic):

Age cat.	mo.	boys	girls	total	ratio boys/girls
6 to 17	12	67/69.6 (1.0)	57/61.0 (0.9)	124/130.6 (0.9)	1.18
18 to 29	12	66/67.9 (1.0)	62/59.5 (1.0)	128/127.4 (1.0)	1.06
30 to 41	12	83/65.8 (1.3)	57/57.7 (1.0)	140/123.4 (1.1)	1.46
42 to 53	12	54/64.7 (0.8)	62/56.7 (1.1)	116/121.5 (1.0)	0.87
54 to 59	6	30/32.0 (0.9)	25/28.1 (0.9)	55/60.1 (0.9)	1.20
6 to 59	54	300/281.5 (1.1)	263/281.5 (0.9)		1.14

The data are expressed as observed number/expected number (ratio of obs/expect)
Overall sex ratio: p-value = 0.119 (boys and girls equally represented)
Overall age distribution: p-value = 0.519 (as expected)
Overall age distribution for boys: p-value = 0.161 (as expected)
Overall age distribution for girls: p-value = 0.878 (as expected)
Overall sex/age distribution: p-value = 0.032 (significant difference)

Digit preference Weight:
Digit .0 : ##########################
Digit .1 : ##########################
Digit .2 : ###########################
Digit .3 : ########################
Digit .4 : ################################
Digit .5 : ############################

Digit .6 : ####################################
Digit .7 : ##############################
Digit .8 : ####################
Digit .9 : ########################

Digit preference score: **5** (0-7 excellent, 8-12 good, 13-20 acceptable and > 20 problematic)
p-value for chi2: 0.093

Digit preference Height:
Digit .0 : ##############################
Digit .1 : ####################################
Digit .2 : ############################
Digit .3 : ##################################
Digit .4 : ############################
Digit .5 : ############################
Digit .6 : ############################
Digit .7 : ##########################
Digit .8 : ################
Digit .9 : ####################
Digit preference score: **6** (0-7 excellent, 8-12 good, 13-20 acceptable and > 20 problematic)
p-value for chi2: 0.017 (significant difference)

Digit preference MUAC:
Digit .0 : ##############################
Digit .1 : ####################
Digit .2 : ##############################
Digit .3 : ########################
Digit .4 : ########################
Digit .5 : ############################
Digit .6 : ####################################
Digit .7 : ########################
Digit .8 : ########################
Digit .9 : ##############################

Digit preference score: **5** (0-7 excellent, 8-12 good, 13-20 acceptable and > 20 problematic)
p-value for chi2: 0.234

Evaluation of Standard deviation, Normal distribution, Skewness and Kurtosis using the 3 exclusion (Flag) procedures

.	no exclusion	exclusion from reference mean (WHO flags)	exclusion from observed mean (SMART flags)
WHZ			
Standard Deviation SD:	0.95	0.95	0.94
(The SD should be between 0.8 and 1.2)			
Prevalence (< -2)			
observed:			
calculated with current SD:			
calculated with a SD of 1:			
HAZ			
Standard Deviation SD:	1.11	1.11	1.05

(The SD should be between 0.8 and 1.2)
Prevalence (< -2)

observed:	51.7%	51.7%	51.4%
calculated with current SD:	53.8%	53.8%	53.4%
calculated with a SD of 1:	54.2%	54.2%	53.6%

WAZ

Standard Deviation SD:	0.95	0.95	0.94

(The SD should be between 0.8 and 1.2)
Prevalence (< -2)
observed:
calculated with current SD:
calculated with a SD of 1:

Results for Shapiro-Wilk test for normally (Gaussian) distributed data:

WHZ	p= 0.506	p= 0.506	p= 0.264
HAZ	p= 0.005	p= 0.005	p= 0.062
WAZ	p= 0.649	p= 0.649	p= 0.773

(If p < 0.05 then the data are not normally distributed. If p > 0.05 you can consider the data normally distributed)

Skewness

WHZ	-0.12	-0.12	-0.17
HAZ	-0.15	-0.15	-0.17
WAZ	-0.07	-0.07	-0.01

If the value is:
-below minus 0.4 there is a relative excess of wasted/stunted/underweight subjects in the sample
-between minus 0.4 and minus 0.2, there may be a relative excess of wasted/stunted/underweight subjects in the sample.
-between minus 0.2 and plus 0.2, the distribution can be considered as symmetrical.
-between 0.2 and 0.4, there may be an excess of obese/tall/overweight subjects in the sample.
-above 0.4, there is an excess of obese/tall/overweight subjects in the sample

Kurtosis

WHZ	0.21	0.21	0.09
HAZ	0.66	0.66	-0.16
WAZ	0.24	0.24	0.11

Kurtosis characterizes the relative size of the body versus the tails of the distribution. Positive kurtosis indicates relatively large tails and small body. Negative kurtosis indicates relatively large body and small tails.
If the absolute value is:
-above 0.4 it indicates a problem. There might have been a problem with data collection or sampling.
-between 0.2 and 0.4, the data may be affected with a problem.
-less than an absolute value of 0.2 the distribution can be considered as normal.

Test if cases are randomly distributed or aggregated over the clusters by calculation of the Index of Dispersion (ID) and comparison with the Poisson distribution for:

WHZ < -2: ID=1.00 (p=0.470)
WHZ < -3: ID=1.09 (p=0.339)
GAM: ID=1.00 (p=0.470)
SAM: ID=1.09 (p=0.339)
HAZ < -2: ID=1.93 (p=0.002)
HAZ < -3: ID=2.88 (p=0.000)
WAZ < -2: ID=1.30 (p=0.132)
WAZ < -3: ID=1.65 (p=0.016)

Subjects with SMART flags are excluded from this analysis.

The Index of Dispersion (ID) indicates the degree to which the cases are aggregated into certain clusters (the degree to which there are "pockets"). If the ID is less than 1 and p > 0.95 it indicates that the cases are UNIFORMLY distributed among the clusters. If the p value is between 0.05 and 0.95 the cases appear to be randomly distributed among the clusters, if ID is higher than 1 and p is less than 0.05 the cases are aggregated into certain cluster (there appear to be pockets of cases). If this is the case for Oedema but not for WHZ then aggregation of GAM and SAM cases is likely due to inclusion of oedematous cases in GAM and SAM estimates.

Are the data of the same quality at the beginning and the end of the clusters?
Evaluation of the SD for WHZ depending upon the order the cases are measured within each cluster (if one cluster per day is measured then this will be related to the time of the day the measurement is made).

```
Time                                                SD for WHZ
point                0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3
01: 0.97 (n=30, f=0)  #######
02: 1.06 (n=28, f=0)  ###########
03: 0.93 (n=30, f=0)  #####
04: 0.87 (n=30, f=0)  ###
05: 0.87 (n=30, f=0)  ###
06: 1.01 (n=30, f=0)  #########
07: 1.08 (n=30, f=1)  ############
08: 0.87 (n=30, f=0)  ###
09: 0.91 (n=30, f=0)  #####
10: 0.90 (n=30, f=0)  ####
11: 0.90 (n=29, f=0)  ####
12: 0.98 (n=29, f=0)  #######
13: 1.05 (n=28, f=0)  ##########
14: 0.68 (n=27, f=0)
15: 1.07 (n=26, f=0)  ###########
16: 0.97 (n=23, f=0)  #######
17: 0.97 (n=23, f=0)  #######
18: 0.90 (n=22, f=0)  ####
19: 1.10 (n=17, f=0)  #############
20: 0.85 (n=10, f=0)  OO
21: 0.91 (n=06, f=0)  ~~~~~
22: 0.65 (n=06, f=0)
23: 1.13 (n=04, f=0)  ~~~~~~~~~~~~~~~
24: 0.54 (n=03, f=0)
25: 0.28 (n=03, f=0)
26: 0.60 (n=03, f=0)
(when n is much less than the average number of subjects per cluster different symbols are used: 0 for n <
80% and ~ for n < 40%; The numbers marked "f" are the numbers of SMART flags found in the different time
points)
```

Appendix 2:

Assignment of Clusters

District	Ozla	Geographical unit (Village)	Population size	Assigned cluster.
AL-Mawaset	Qadas	Bani Salah	570	1
		AL-Hegr	922	2
		AL-Hanan	1177	3
	Bani Hammad	Al-Haqeebah	5871	4
		Al-Moenah	1567	5
	Bani Yusef	Berdad	1310	6
		Adawm	3696	7
Same'a	Same'a	Hawrah	8621	RC
Same'a	Same'a	Sarrabwait Aala	5517	8
	Same'a	Arehawah	1184	9
Aselow	AL-Aqaishah	Ashoraif	670	10
	Al-Hariabah	Al-Hobar	2095	11
Al Msrakh	Al-Akhrooth	Al-Amed	1160	12
		Ashabailah	622	13
		Bolaan	2991	14
	Abdaan	Azowah	2853	15
Saber Al Moadm	Tabasheaa	Abaar	1552	RC
Saber Al Moadm	mareet	Al-Mishiaf	4544	16
	Hazah	Al-Aramah	2316	17
Khadder	Khadder Alsalmi	Al-Dmnah	13599	RC
Khadder	Khadder Alsalm	Shaab Al-Norain	2534	18
		Hamadan	3518	19
		Hamadenah	3152	20
	Khadder Albadw	Maswar	572	21
		Arahidah	16768	22
		Thabwan Asfal	2618	23
		Asah	687	24
Al Maafr	Alsawa	Asharaf	3154	25
		Gabal Yazeed	1483	26
		Al-Khiami	3127	27
	Ashaoobah	Khawah	3883	28
	Ashaoobah	Al-Wahez	1323	RC
	Al-Qlaebah	Al-Koddam	2182	29
	Al- Snah	Bani Yahia	1372	30

Appendix3:

Report for Evaluation of Enumerators

Weight :

	Precision : Sum of Square]W1-W2 [	Accuracy : Sum of Square]Enum.(W1+W2 -( )Superv.(W1+W2 [(	No -/+ . Precision	No -/+ . Accuracy
Supervisor	7337.72		9/1	
Enumerator 1	0.13OK	18843.00OK	5/2	8/1
Enumerator 2	6432.17OK	12412.30OK	5/3	7/2
Enumerator 3	38265.20POOR	15908.20OK	8/1	1/9
Enumerator 4	24118.60POOR	11066.90OK	5/1	5/5
Enumerator 5	22945.20POOR	11832.20OK	7/0	3/6

Height :

	Precision : Sum of Square]H1-H2 [	Accuracy : Sum of Square]Enum.(H1+H2 -(Superv.(H1+H2 [(	No -/+ . Precision	No -/+ . Accuracy
Supervisor	78.12		2/7	
Enumerator 1	8.35OK	266.35POOR	4/4	5/5
Enumerator 2	218.69POOR	77.61OK	4/5	4/5
Enumerator 3	644.77POOR	174.49OK	5/5	2/8
Enumerator 4	2.37OK	290.21POOR	5/2	8/2
Enumerator 5	663.57POOR	176.99OK	1/8	5/4

MUAC :

	Precision : Sum of Square]MUAC1-MUAC2 [	Accuracy : Sum of Square]Enum.(MUAC1+MUAC2 -(Superv.(MUAC1+MUAC2 [	No -/+ . Precision	No -/+ . Accuracy
Supervisor	2358.50		6/2	
Enumerator 1	6.16OK	12649.80POOR	6/3	10/0
Enumerator 2	12959.30POOR	1606.21OK	3/5	5/4
Enumerator 3	123.38OK	6488.84OK	2/1	7/2
Enumerator 4	12994.10POOR	1626.35OK	6/2	4/3
Enumerator 5	20681.40POOR	14273.30POOR	7/0	2/7

NOTE: the standardization exercise was not done per individual, it was done per team thus the unit of reference was not the enumerator but was the team.

Appendix 4 : survey questionnaire

الجمهورية اليمنية
وزارة الصحة العامة والسكان
مكتب الصحة العامة والسكان بمحافظة تعز

) و الاصحاح البيئي و النظافة IYCFPتقييم الحالة التغذوية + ممارسات اطعام الاطفال و الرضع(م.2017), محافظة تعز, مارس WASHالشخصية(

1)استبيان الأسرة (نموذج

أولاً. يتم الشرح للساكنين في المسكن (البالغين منهم) عن التقييم والتعريف بالجهة القائمة عليه والأشخاص العاملين فيه (أعضاء الفريق)، ثم بعد ذلك الحصول على الموافقة الشفهية منهم.

الموافقة	1.	نعم	
	2.	لا	انتقل إلى الصفحة التالية

هل الأسرة مقيمة أم نازحة؟		
1.	مقيمة.	
2.	نازحة	

في حال الأسرة المقيمة. هل تقيم معكم اسرة أو اسر نازحة؟		
1.	نعم	
2.	لا	

المديرية	العزلة	القرية/ الحارة
اسم المرفق الصحي التي تقع في زمامه القرية :.....		

تاريخ المقابلة	يوم	شهر	سنـــــة				رقم مسلسل الأسرة بحسب حصر العينة	
		Ø	2	Ø	1	7		

اسم رب الأسرة:	

	الفريق	الاسم	التوقيع
فريق التقييم رقم	1الباحثة		
	2الباحثة		
	3الباحثة		
	رئيس الفريق		
	المشرف الميداني		

بين فيما إذا كان هناك:

1.	غياب الأسرة عند الزيارة الأولى ويتطلب الأمر زيارة ثانية	
2.	غياب طفل عند الزيارة الأولى ويتطلب الأمر زيارة ثانية*	

* عند غياب الطفل، تستكمل كل بياناته عدا القياسات الإنثروبومترية والأوديما حيث تستكمل عند حضوره.
ملاحظة: البيانات في الغلاف هي للاستخدام الميداني والإداري من قبل أعضاء الفريق.
يملئ من قبل رئيس الفريق (تستخدم لإدخال البيانات)

تاريخ المقابلة	يوم		شهر		سنـــــة			
			Ø		2	Ø	1	7

رقم الفريق	

رمز القرية / الحارة			رمز العزلة		
رمز المديرية			رمز المحافظة		
رقم طبقة التقييم:			رقم العنقود		

2) أم ريفية (1هل المنطقة حضرية (	

لا)2 نعم ، 1غياب الأسرة حتى بعد الزيارة الثانية (	
لا) 2 نعم ، 1الموافقة (إذا (لا) إنتقل إلى الأسرة التالية	

رقم استبيان الأسرة			
2) أم نازحة (1الاسرة مقيمة (			
لا) 2 نعم ، 1في حال الاسرة المقيمة، هل تأوي اسرة نازحة (			

العمل المكتبي

	الاسم	اليوم		الشهر		السنة				التوقيع
مدخل البيانات										
مدخل البيانات										
المراجعة										

الملاحظات
.....
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.....
.....
.....
.....

بيانات عن الأسرة (الأحياء فقط والذين يعيشون حاليا في الأسرة)001س :

	العدد	الأسرة (الأحياء فقط الذين يعيشون حاليا- يوم الزيارة- في عدد أفراد الأسرة)	H001a
	العدد	سنوات (الأحياء فقط الذين يعيشون حاليا في 5عدد الأطفال أقل من الأسرة -يوم الزيارة)	H001b
	العدد	شهرا (الأحياء فقط الذين 24 الى 0عدد الأطفال الذين اعمارهم من يعيشون حاليا في الأسرة -يوم الزيارة)	H001c
		أشهر (الأحياء فقط الذين يعيشون حاليا في الأسرة 6عدد الأطفال أقل من -يوم الزيارة)	H001d

بيانات عن جنس رب الأسرة (الشخص الذي يتكفل بالإنفاق على الأسرة)002س :

	نوع رب الأسرة ما			H002
		ذكر	1.	
		أنثى	2.	

بيانات عن راعي الأسرة (الشخص الذي يقوم برعاية الأسرة وخصوصا الأطفال)006 – س 003س :

	نوع راعي الأسرة ما			H003
		ذكر.	1.	
		أنثى.	2.	
	الحالة الاجتماعية لراعي الأسرة			H004
		متزوج .	1.	

	2.	أرمل.		
	3.	مطلق.		
	4.	حانق.		
	5.	عازب.		

	المستوى التعليمي لراعي الأسرة			H005
انتقل الى H007	1.	أمي.		
	2.	يقرأ ويكتب.		
	3.	تعليم أساسي.		
انتقل الى H007	4.	تعليم ثانوي.		
	5.	تعليم عالي (جامعة أو كلية أو معهد).		
		اذا تعليم اساسي: الى اي صف اكمل/تي الدراسة؟		H006

بيانات عن الماء والإصحاح البيئي والنظافة011 – س 007س :

إنتقل إلى				
	ما هو المصدر الرئيسي لمياه الشرب في منزلكم؟ (خيار واحد فقط)			H007
	1.	مشروع مياه موصل إلى المنازل (حكومية أو خاصة)		
	2.	حنفية عامة /نقطة مياه مجتمعية / مياه السبيل		
	3.	بئر ارتوازية		
	4.	بئر مغطاة		
	5.	بئر غير محمي		
	6.	عين مغطاة		
	7.	عين ماء غير محمية		
H009 ←	8.	مياه معالجة (معدني أو كوثر)		
	9.	مياه سطحية جدول/ غيل/ قنوات ري		
	1Ø.	تجميع مياه الأمطار محمية		
	11.	تجميع مياه الأمطار غير محمية (صهاريج مياه / بركة/ ماجل)		
	12.	وايتات أو عربات نقل المياه		
	13.	أخرى: تذكر		

انتقل إلى	هل تقومون بمعالجة الماء قبل الشرب؟			H008a
	1.	نعم		

H009 ←		لا	2.	
H009 ←		لا أعرف	3.	
	ماهي طريقة المعالجة الرئيسية المستخدمة لمياه الشرب (خيار واحد فقط)			H008b
		غلي الماء قبل الشرب	1.	
		استخدام الكلور	2.	
		الترشيح عبر قماش نظيف	3.	
		استخدام مرشح سيراميك أو رمل أو ما شابه (فلتر أو قطارة)	4.	
		ترك الماء ساكنا قبل الشرب لترسيب الشوائب.	5.	
		استخدام الشب (شب الفوّاد)	6.	
		تذكر ..... أخرى:	7.	

	للملاحظة: تحقق من توفر نقاط تخزين المياه لغرض الشرب: هل الوعاء الحاوي لمياه الشرب نظيف؟			H009
		نعم. (عدم وجود طحالب)	1.	
		لا. (وجود طحالب)	2.	

	اين تتم عملية قضاء الحاجة (التبرز)؟ (اختر فقرة من التالي)- تحقق من توفر المرافق والممارسات			H010
		مرحاض - يتوفر فيه صب الماء للتنظيف الذاتي (سيفون أو دلو) إلى مجاري عمومية.	1.	
		مرحاض - يتوفر فيه صب الماء للتنظيف الذاتي (سيفون أو دلو) إلى بيارة.	2.	
		مرحاض - يتوفر فيه صب الماء للتنظيف الذاتي (سيفون أو دلو) إلى حفرة مرحاض.	3.	
		مرحاض - يتوفر فيه صب الماء للتنظيف الذاتي (سيفون أو دلو) إلى العراء.	4.	
		مرحاض - يتوفر فيه صب الماء للتنظيف الذاتي (سيفون أو دلو) إلى مكان غير معروف.	5.	
		حفرة مرحاض محسنة مهواه	6.	
		حفرة مرحاض بلوح	7.	
		حفرة مرحاض بدون لوح/ غير مغطاة	8.	

		مرحاض سماد	9.	
		دلو	1Ø.	
		مرحاض معلق	11.	
		قضاء الحاجة في العراء (في الحقول مثلا، الخ.)	12.	
		تذكر ..... أخرى:	13.	

H011b اذا ذكرت: بماذا؟ 1بالماء فقط. 2بالماء و الصابون. 3 الماء مع الرماد/ التراب/ القضاض/ أوراق الشجر.	1ذكرت. 2لم تذكر.	اذا ذكرت , 1متى تقومين بغسل اليدين (سجل الرقم اذا لم تذكر)؟2و سجل الر قم	H011a
		a. بعد قضاء الحاجة.	
		b. قبل الأكل.	
		c. قبل اعداد الطعام	

	C013b	C013a	C012		
ماذا قالت الأم عن تاريخ ميلاد الطفل(سن الطفل) ؟	عمر الطفل (بالأشهر)	تاريخ الميلاد (بالهجري أو الميلادي) شهر59 إلى 0للأطفال من سن ( )	نوع الطفل 1ذكر = 2أنثى =	الاسم الأول للطفل	رقم الطفل
		يوم شهر سنـــة			1.
		يوم شهر سنـــة			2.
		يوم شهر سنـــة			3.
		يوم شهر سنـــة			4.
		يوم شهر سنـــة			5.
		يوم شهر سنـــة			6.
		يوم شهر سنـــة			7.
		يوم شهر سنـــة			8.

أشهر)6 شهر في الأسرة (يترك فارغاً للأطفال أقل من 59- 6: القياسات الجسمانية للأطفال بين سن 017 – س 014س

C017	C016	C015	C014			
أوديما) (التوذم في كلا القدمين = نعم1 = لا2 = رافض8 = غائب9	قياس محيط الذراع (سم) (المواك) = رافض88.8 = غائب99.9	الطول (سم) = رافض888.8 = غائب999.9	الوزن (كجم) = رافض88.8 = غائب99.9	عمر الطفل (بالأشهر) (من الصفحة السابقة)	الاسم الأول للطفل (من الصفحة السابقة)	رقم الطفل (ينقل من الصفحة السابقة)

س018 – س023: التحصين و المراضة للأطفال بين سن صفر إلى 59 شهراً في الأسرة (كل الأطفال تحت سن 5 سنوات)								
			C018	**C019**	**C020**	**C021**	**C022**	**C023**
			لكل الاطفال				***للأطفال بعمر 6 اشهر فاكثر***	***للأطفال بعمر 9 أشهر فأكثر***
رقم الطفل (ينقل من الصفحة السابقة)	**الاسم الأول للطفل (من الصفحة السابقة)**	**عمر الطفل (بالأشهر) (من الصفحة السابقة)**	**الإسهال * خلال الأسبوعين الماضيين** **1 = نعم** **2 = لا**	**سعال أو صعوبة في التنفس خلال الأسبوعين الماضيين** **1 = نعم** **2 = لا**	**الحمى خلال الأسبوعين الماضيين** **1 = نعم** **2 = لا**	**هل تم إعطاء فيتامين (ا) خلال الستة أشهر الماضية؟ (إظهار عينة)** **1 = نعم** **2 = لا** **3 = لا أعرف**	**هل أخذ الطفل جرعة لقاح الخماسي3 (حقنة في الفخذ)؟** **1 = نعم من البطاقة** **2 = نعم بالتذكر** **3 = لا أعرف** **4 = لم يطعم**	**للأطفال بعمر 9 أشهر فأكثر، هل تم تطعيم الطفل ضد الحصبة (حقنة في اليد اليسرى)؟** **1 = نعم من البطاقة** **2 = نعم بالتذكر** **3 = لا أعرف** **4 = لم يطعم**

شهرا ميلاديا فقط. 24 –0الـذين اعمـارهم

شهرا ميلاديا.24) خذي الاطفال الذين اعمارهم اقل او يساوى 6من صفحة الاعمار (صفحة رقم

6 في صفحة الاعمار ص1 (الأول) : رقم الطفل1الطفل

الاسم : _____ بالأشهر : شهرا.

م	السؤال	الإجابة	الانتقالات
F024	) ماذا أطعمتيه بعد الولادة مباشرةً ؟ I بعدما ولدتي(أسم الطفل		
	I . أرضعته من الثدي		
	2 . أطعمته سكر مع الماء.		انتقل الى F024b
	3 . أعطيته عسل.		انتقل الى F024c
	4..... أخرى حدد.		
F024a	اذا أرضعته من الثدي بعد الولادة بعد كم دقيقة ارضعتيه؟	دقيقة	انتقل الى F025
F024b	اذا اطعمتيه سكر مع الماء بعد كم دقيقه من الولادة؟	دقيقه	انتقل الى F025
F024c	اذا اطعمتيه عسل, بعد كم دقيقه من الولادة؟	دقيقه	
F025	متى بدأتي بإعطاء الطفل I (أسم الطفل I) أغذية تكميلية الى جانب حليب الثدي.	عندما بلغ عمره: شهراً	
F025a	ماهي هذه الاغذية التكميلية I- 2-		

عن الرضاعة الطبيعية و الادوية و الفيتامينات: F026- F030اسالة

م	السؤال	I = نعم 2 = لا 3 = لا أعرف	اذا نعم: كم عدد المرات؟	الانتقالات
F026	) يرضع ؟ I هل (أسم الطفل			إذا لا أو لا اعرف انتقل الى س F028
F027	) رضع يوم أمس خلال النهار أو الليل ؟ I هل (أسم الطفل			إذا نعم انتقال الى سF029
F028	) استهلك حليب الثدي باي وسيله ، يوم أمس خلال I هل (أسم الطفل النهار أو الليل؟ بحليب الثدي بطرق مختلفة مثل (I) بعض الاحيان تتم تغذية الطفل حليب الثدي ثم إعطاءه للطفل بملعقة أو بالكوب أو بالرضاعة . ويشمل ذلك حليب ثدي أمه أو حليب ثدي امرأة أخرى ؟			
F029	) أعطي أي فيتامينات قطر أو أي أدوية أخرى بشكل I هل (أسم الطفل قطر ، يوم أمس خلال النهار أو الليل ؟			

F030	) أعطي [الاسم المحلي لمحلول الارواء الفموي] l هل (أسم الطفل أمس خلال النهار أو الليل ؟			

اسالة عن تناول الطفل للسوائل(اغذية بشكل سائل):

م	السؤال		الإجابة
أقرائي الاسئلة التالية : أقراء قائمة السوائل واحدة تلو الاخر ثم أجب عنه أمام كل سؤال ؟			
F03 l	) تناول [أسم السائل] يوم أمس خلال l هل (أسم الطفل النهار أو الليل ؟ أقراء القائمة ووجه السؤال لكل نوع من أنواع السوائل في القائمة على حده.	l نعم = 2 لا = 3 لا أعرف =	F032 إذا كان " نعم " كم عدد المرات ؟ اذا لا تعلم اكتبي "لا اعلم"
A	ماء صافي		
B	خلطة لتغذية الرضَع :مثل الـ (الاسم المحلي) مثل الشبيسه، خلطة تقوم بمقام الحليب وتكون بشكل سائل . مثل الشربة		
C	الحليب: مثل الحليب المعلب أو الحليب البودرة أو حليب حيوانات الطازج		
D	العصائر والمشروبات العصيرية		
E	حساء صافي أو مرق		
F	زبادي		
G	عصيدة خفيفة أو ثريد خفيف (أقرب الى السائل)		
H	شاي أو بن أو نسكافيه		
I	عصير الفواكه		
J	أي مشروبات محلية شائعة الاستخدام		
	اذا كل الاجابات ب " لا": اساليها:) أي شيء من الرضاعة l هل شرب(أسم الطفل (البزيه) يوم أمس خلال النهار أو الليل؟		اذا نعم ضيفي تلك السوائل التي شربها الطفل الى القائمة(K و L(وو
K			

الاغذية الصلبة او الشبه الصلبة/الناعمة(أي التي ليست بشكل سائل):

م	السؤال	الإجابة
خطوة بخطوة عن ماذا أكل <u>يوم/أمس</u> من لما قام من النوم حتى نام ليلاً أعيدي عليه الاسئلة والاستفسارات 1دعي الام تحكي لك عن الطفل مراراً ، حتى تحصلي على اجابات دقيقة بحسب خيارات أنواع الاغذية الدقيقة : -		
F033	1هل (أسم الطفل) تناول (أسم الغذاء) أقرئي القائمة ووجهي السؤال لكل نوع من أنواع الاغذية في القائمة على حده.	1نعم . 2لا . 3 لا . أعرف	F034 إذا نعم : كم عدد المرات؟ و اذا قالت" لا اعرف" اكتبي "لا اعرف"
A	اي أغذية صلبة أو شبة صلبة مصنوعة من الحبوب مثل (عصيدة ، ثريد ، خبز ، أرز ، مكرونة)		لا اعرف( )
B	يقطين (دبه – فهادد) ، جزر ، كوسة ، بطاطا حلوه(جزر هندي)		
C	بطاطه بيضاء والاغذية الاخرى المصنوعة من الجذور		
D	اي خضروات ورقية خضراء داكنة مثل السلطة ووالخ		
E	مانجو ناضج – الباباوي (عنب فلفل – الضبيا) أو اي فواكة محلية غير الليمون الحامض		
F	اي فواكة أو خضروات اخرى (لم تذكر سابقاً)		
G	كبده / كلاوي / قلوب / أو اي لحمة أعضاء داخلية أخرى		
H	أي حلوم أخرى مثل (البقري ، الماعز ، الاغنام ، الدجاج ، الارانب)		
I	البيض		
J	أسماك طازجة أو مجففة أو محار أو أي ماكولات بحرية أخرى		
K	أي أغذية مصنوعة من البقوليات (الفاصوليا ، الفول ، البازلاء ، دجر أو كشري)		
L	جبن ، زبادي ، أي من منتجات الحليب الاخرى		
M	زيوت، سمن, زبدة، أو اي اغذية أخرى مصنوعة منهم		
N	أطعمة سكرية (شوكولاتة ، حلويات ، مليم ، فطائر حلوة ، كعك ، بسكويت ، أخرى		
O	توابل ومنكهات مثل (فلافل حار ، بهارات ، أعشاب ، أسماك مطحونه		
P	جراد / شظوية ، حلزونيات ، أخرى		
Q	أغذية مصنوعة من زيت النخيل الاحمر ، ومن غلاف جوز الهند الاحمر ، مرقة أو حسى لب النخيل		
R			
	)أكل أي مأكولات صلبة أو شبة صلبة/ناعمة ، يوم أمس خلال النهار أو 1إذا كانت كل الاجابات بـ (لا): اساليها: هل (أسم الطفل الليل ؟ 1نعم, 2= لا , 3 = لا أعرف ضيفي الماكولات تلك الى القائمة اعلاه.	

شهرا) فتعبأ بيانات كل طفل على 24اذا كان في الاسرة اكثر من طفل واحد (اعمارهم اقل من او يساوي 3)حده(في النموذج

.

م2017تقييم الحالة التغذوية والوفيات في محافظة تعز، شهر مارس
2) يوم من تاريخ يوم الزيارة (نموذج 90استمارة رصد أفراد الأسرة خلال

رقم العنقود: _____ مديرية التقييم: _____ الحي/ القرية: _____ التاريخ: _____

طبقة التقييم: _____ رقم الفريق: _____ رقم استبيان الأسرة: _____

	الاسم	الجنس (ذكر أو أنثى)	العمر بالسنوات	التحق خلال فترة 90 يوم من تاريخ يوم الزيارة	غادر خلال فترة 90 يوم من تاريخ يوم الزيارة	ولد خلال فترة 90 يوم من تاريخ يوم الزيارة	توفي خلال فترة 90 يوم من تاريخ يوم الزيارة	سبب الوفاة	موقع الوفاة
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
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17									
18									
19									
20									

يوم من تاريخ التقييم90هام: يتم تسجيل كل الأفراد الموجودين حاليا و كل من التحق بالأسرة أو غادرها أو توفى أو ولد خلال فترة

رموز أسباب الوفاة	
1 = الاسهال	5 = سوء التغذية
2 = الحمى	6 = العنف / بسبب الصراعات
3 = الحصبة	7 = أخرى (حدد)
4 = مشاكل في التنفس	

رموز مواقع الوفاة

	1= في الموقع الحالي
	2 = أثناء الهجرة
	3= في آخر مكان سكن فيه
	4 (حدد) = أخرى

Appendix 5 : Survey work plan

No.	Activity	Date
1	Preparing of survey protocol & questionnaire	27/2 – 7/3/2017
2	Preparation for field work+ training + Data collection	17/3 - 31/3/2017
3	Data Analysis + Report Writing	1/4 – 15/4/2017