

**Rapid Nutritional Assessment for Children (6-59 Months) of Age in Syrian Refuge Families in Al-Anbar Governorate/Al Qa'im District**  
**(Round two)**



**Ministry of Health / Nutrition Research Institute**  
**United Nations International Children's Fund**



## **ACKNOWLEDGEMENT**

This report summarizes the results of the Rapid Nutritional Assessment of under five children (6-59 months) in Syrian refugee camp located in Al-Anbar governorate / Al-Qa'im district in Iraq. The survey was carried out by the Nutritional Research Institute (NRI) / Ministry of Health-Iraq with the supported provided by United Nations International Children's Fund (UNICEF) / Iraq office. The support also provided by the head of nutrition department in the Directorates of Health in the Al-Anbar governorate and is greatly appreciated and was the cornerstone for the success of this survey.

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## **ABBREVIATIONS**

BMI	Body Mass Index
MoMD	Ministry of Migration and Deserted
NRI	Nutrition Research Institute
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Fund
WHO	World Health Organization

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## **EXECUTIVE SUMMERY**

The aim of this study was to assess the nutritional status of children (6-59 months) in Syrian refugee camp located in Al-Anbar governorate / Al-Qa'im district in Iraq. The assessment was carried out by the Nutritional Research Institute (NRI) / Ministry of Health-Iraq with the supported provided by United Nations International Children's Fund (UNICEF) / Iraq office.

The study was conducted for the period 17-21 March 2013. A total of 565 children were included in the study. Information like name, weight, height, sex, age and anthropometric measurements were collected for each child.

The assessment results showed that 13.3% of children were stunted (low length/height for her/his age) or chronically malnourished. While 3.7% of children were suffering from general malnutrition (low weight for his/her age) and 1.8% were wasted (low weight for his/her length/height) or acutely malnourished, no significance difference in malnutrition rates between boys and girls.

The nutritional status of children was also assessed by calculating the body mass index (BMI) for age and the results showed that 2.3% of the children were wasted, 0.5% were severely wasted and 4.8% were overweight.

## **INTRODUCTION**

Due to the on-going clashes between Syrian government forces and the opposition fighters, refugees have continued to flee the violence and seek safety in Iraq. The majority of new arrivals continue to enter into Kurdistan, with 3,405 reportedly arriving in the past week. The reopening of the Al Qa'im border point during the reporting period, albeit with restrictions, has been welcomed, enabling refugee movements to resume through this crossing point. Al Waleed (in Anbar Governorate) and Rabi'aa (Nineveh Governorate) border crossing points have remained open (1).

The total number of Syrians who have sought asylum in Iraq stands at 33,704 refugees, out of which 28,704 are hosted in Kurdistan Region and 5,484 hosted in Al Qa'im. It is reported that the Syrian side of Al-Qa'im is now totally controlled by the Syrian Free Army. The Syrian National Army is still controlling the Syrian side of Rabiaa Crossing Point (1).

On 18 September 2012, the Al-Qa'im border crossing point was finally reopened. Restrictions have been imposed, however - families with children below 15 years of age, women, elderly, sick and injured persons are being allowed to enter, at a rate of some 120 a day. The total number of Syrians who crossed into Iraq via Al-Qa'im from 18th to 26th September is 1,109 individuals. The majority of refugees who were accommodated in the public buildings have now been relocated to the Al Qa'im camp. Most of the public buildings have now been vacated – following the relocation of 496 persons to Zone H of the camp, only two schools and one health centre are still accommodating refugees (463 persons). These remaining refugees transferred to the Ministry of Migration and Deserted (MoMD) camp as agreed with local authorities and the Emergency Cell on 26 September. The total number of Syrians accommodated in the Al Qa'im camp currently stands at 4,594 (3,140 individuals in camp 1, and

1,454 individuals in camp 2). The total number of refugees currently in the MoMD camp is 875 individuals. Some 643 persons have been included in the sponsorship programme (1).

The establishment of a third camp at Al-Obaidi, some 23 km from Al-Qa'im border point and 12 km from Al-Qa'im camp, is being considered, in anticipation of a larger Syrian refugee influx. Once established, this camp could accommodate 20,000 refugees. The Gol's official approval of the establishment of the camp on the given land plot is expected to be received in the coming few days (1).

In Al-Qa'im construction has been completed in Zone H (United Nations High Commissioner for Refugees camp) which includes 93 tents, five sets of toilets & shower, 5 kitchens, sub base roads and net pipe of potable water. As agreed with the local authorities in Al-Qa'im, United Nations High Commissioner for Refugees (UNHCR) received 492 Syrian refugees who were relocated from Fateh Al-Fatooh primary school and Al-Karbala secondary school. The relocation proceeded smoothly thanks to the joint efforts of Iraqi Military Forces, UNHCR and its implementing partners (IPs). 5 generators have been delivered to Al Qa'im camp (three 250 KAV, one 50 KAV and one 35 KAV). One 250 KAV generator was installed in Zone A, B, and C (UNHCR camp). UNHCR's implementing partner received 400 family tents which are stored in UNHCR rub hall, ready to be installed (1).

As for 3/10/2012; (33,704) Syrians have been registered in Iraq, including 4,263 in the past week. More than 28,000 are Syrian nationals of Kurdish origin who have arrived in the Kurdistan Region (Dohuk, Erbil and Sulaimaniya). Further south, at Al-Qa'im, Anbar governorate, more than 5,600 Syrian nationals have sought asylum since the Baghdad government opened the country's borders in late July. Initially, many of those fleeing into the Kurdish

Region were single refugees. Recently, however, there have been a growing proportion of families among the new arrivals (2).

The revised regional response plan estimates that up to 60,000 Syrians may be in need of protection and assistance in Iraq by the end of the year (2).

## **SURVEY METHODOLOGY**

### **Objectives**

- Assessment of the nutritional status of children (6-59 months) of age in Syrian refugee families.
- Identification of the age groups at highest risk.
- Evaluation of the need to develop a response plan for improving the situation.

### **Survey Location**

A refugee camp in Al Qa'im District in Al-Anbar governorate.

### **Survey duration**

The survey was carried out from 17-21/3/2013 (one day training and four days data collection).

### **Survey Population**

All eligible children (6-59 months) of age in Syrian refugee families in Al-Anbar governorate/Al-Qa'im district camp.

### **Questionnaires**

Information like name, weight, height, sex and birth date were collected according to World Health Organization (WHO) guide on rapid nutritional assessment in emergencies in which additional workload and delay should be considered (3). The central supervision was responsible for reviewing and editing the filled form, assuring consistency and proper filling of the forms, whenever inconsistency data revealed, team member were requested to re-visit the household and re-fill the form.

### **Anthropometry**

Anthropometric measurements were done for all children included in the survey using standard uniscale weight measuring scale and standard height/length measuring board.

### **Team composition and field work**

- One local supervisor took the responsibility of supervising the field work.
- Six teams comprised from two personnel.

### **Data computerization and Analysis**

Data entry was done using MS Excel based programme developed by NRI and analyzed with SPSS. The nutrition part was analyzed by WHO Anthro software. Data were compiled and analyzed by using SPSS V19 and Anthro V3.2.2.1 for the nutrition part. Nutrition Data were analyzed for new WHO reference standard.

### **Definition of outcomes**

The classification of malnutrition as a public health problem according to WHO shown in table (1) below (4).

**Table (1): Classification of Malnutrition as a public health problem**

Index	Normal/low	Poor/medium	Serious/high	Critical/very high
Wasting	<5%	5-9.9%	10-14.9%	>15%
Stunting	<20%	20-29.9%	30-39.9%	>40%
Underweight	<10%	10-19.9%	20-29.9%	>30%

## SURVEY RESULTS

A total of 565 Syrian children between (6-59 months) of age enrolled in the assessment, 285 children were boys and 280 children were girls with nearly a male: female ratio (1:1) from the study sample and table (2) shows the distribution of children's age groups by their sexes.

**Table (2): Distribution of children by age groups and their sexes**

Age group	Count (%)	Sex		Total
		Boys	Girls	
6-11	Count	33	38	71
	%	46.5%	53.5%	100.0%
12-23	Count	61	67	128
	%	47.7%	52.3%	100.0%
24-35	Count	69	71	140
	%	49.3%	50.7%	100.0%
36-47	Count	64	54	118
	%	54.2%	45.8%	100.0%
48-60	Count	58	50	108
	%	53.7%	46.3%	100.0%
Total	Count	285	280	565
	%	50.4%	49.6%	100.0%

### **Nutritional Assessment**

#### **Underweight**

Underweight is indicated by weight-for-age below  $-2$  SD of the median reference WHO population (5), and severe underweight is indicated by weight-for-age lower than  $-3$  SD of the same population. The prevalence of underweight was estimated from those children falling below those cut-off points.

The prevalence of underweight among all children was 3.7% (Lower than underweight found in round one which was 7.6%) with a higher percentage found among girls compared to boys (4.3% and 3.2%) respectively. Severe underweight was observed in 1.2 % of all children measured as shown in Table (3).

### **Stunting**

Stunting and severe stunting were assessed as the prevalence of length/height-for-age below  $-2$  SD, and  $-3$  SD of the reference WHO population respectively. The overall prevalence of stunting was 13.3% compared to 15.1% found in round one, and 4.3% suffered from severe stunting with no significant differences between boys and girls ( $P>0.05$ ) (13.1% and 13.6%) respectively as in Table (3).

### **Wasting**

Wasting is an indicator of current nutritional health status, and is directly influenced by feeding behaviour, morbidity and house conditions. Wasting and severe wasting were assessed as the prevalence of weight-for-length/height below  $-2$  SD, and  $-3$  SD of the reference WHO population respectively. Overall, about two percent of all children (1.8%) in the sample were below  $-2$  SD of the reference population median compared to 4.8% in round one, and 0.5% had severe wasting as in Table (3) compared to 2.2% in round one. With a higher prevalence of wasting found in girls 2.1% than in boys 1.4%.

### **Overweight**

Overweight in under five years old children can be assessed using the newly developed WHO growth reference standards using the BMI for age growth indicator in which any child that has a BMI for age above  $+2$  SD will suffer from overweight and he will be obese if this indicator exceeds  $+3$  SD from WHO growth reference standards , Hence , around 5% of children in this survey had

overweight with 1.6% of them suffer from obesity , and a higher prevalence of overweight can be found in girls 5.4% as shown in table (3).

*Table (3): Nutritional status of Syrian children under 5 years, by WHO reference standards (2005)*

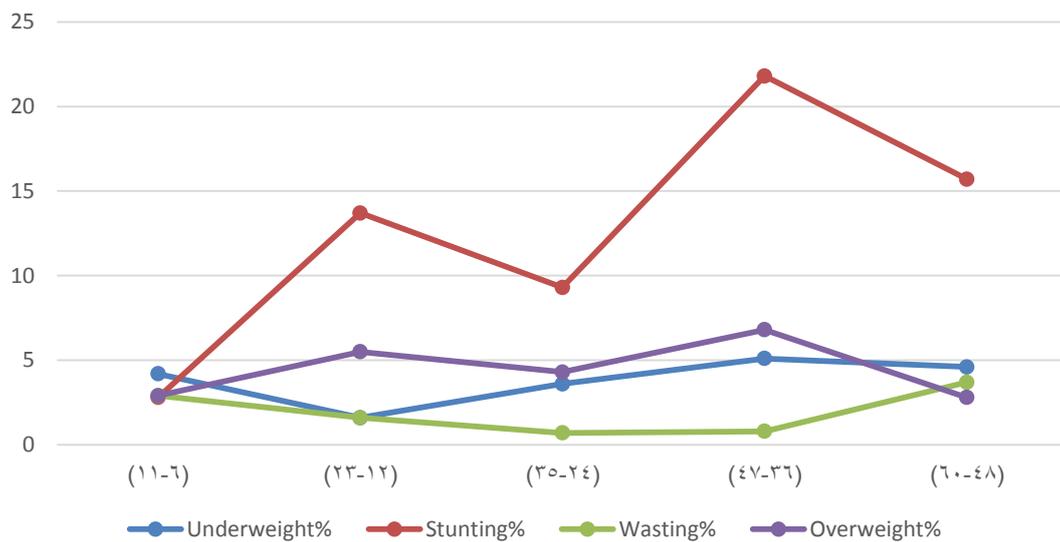
WHO z-scores				
	WAZ	HAZ	WHZ	BMI AZ
	Underweight%	Stunting%	Wasting%	Overweight%
% below -2 SD	3.7	13.3	1.8	2.3
% below -3 SD	1.2	4.3	0.5	0.5
% above +2 SD	NA	NA	3.3	4.8
<b>Sexes</b>				
Male	3.2	13.1	1.4	4.2
Female	4.3	13.6	2.1	5.4

### Age trends for malnutrition Indicators

The prevalence estimated and Z-scores were calculated to assess the distribution of malnutrition indicators (wasting, stunting, underweight and overweight) by age group and it has been found that the highest prevalence of malnutrition rates is found in (36-47 months) of age except for wasting (48-60 months) as shown in Table (4) and Figure (1).

*Table (4): Growth indicators of under 5 years old Syrian children by age groups (in months)*

BOTH	Weight-for-age %		Length/height-for-age %		Weight-for-length/height %		BMI-for-age %	
	% < -3SD	% < -2SD	% < -3SD	% < -2SD	% < -3SD	% < -2SD	% > +2SD	% > +3SD
<b>(6-11)</b>	1.4	4.2	1.4	2.8	0	2.9	2.9	1.4
<b>(12-23)</b>	0.8	1.6	3.2	13.7	0.8	1.6	5.5	0.8
<b>(24-35)</b>	0.7	3.6	6.4	9.3	0.7	0.7	4.3	0.7
<b>(36-47)</b>	2.5	5.1	8.4	21.8	0	0.8	6.8	3.4
<b>(48-60)</b>	0.9	4.6	0	15.7	0.9	3.7	2.8	1.9
<b>Total (6-60)</b>	1.2	3.7	4.3	13.3	0.5	1.8	4.8	1.6



**Figure (1): Distribution of malnutrition rates in Syrian children by age groups (in months)**

## **CONCLUSIONS**

- 1- Underweight, Stunting, Wasting prevalence rates were 3.7%, 13.3% and 1.8% respectively that considered to be low according to WHO classification.
- 2- Most malnutrition indicators of a public health significance mostly found in the age group (36-47 months) and that was similar to the finding of round one.
- 3- No significance difference in malnutrition rates between boys and girls.

## **RECOMMEDATIONS**

- 1- Strengthening Multi-sectorial collaborations in dealing with the resultant malnutrition rates in a coordination process with various humanitarian actors/stakeholders.
- 2- Providing all refugees with meals three times per day. The food distribution is should be monitored on a daily basis; both the quality and quantity to be checked. Ensure the sustainability of Sanitation/Hygiene by providing continuously hygiene kits and is conducting awareness rising about sanitation and hygiene issues.
- 3- Health Education campaigns about healthy life style behaviors through teams visiting Al Qa'm camp to follow up on the recommendations listed in a joint work with the Ministry of Education.

## REFERENCES

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- 3- WHO; Field guide on rapid nutritional assessment in emergencies, 1995.
- 4- Proposed Surveillance System to assess the Nutritional Status of People at the National Level of Member State of Eastern Mediterranean Region, by Dr.Ghada Anis Yahia ,April 2008.
- 5- WHO Growth reference standards, 2005.

## ANNEXES

أستمارة التقييم التغذوي السريع للأطفال السوريين النازحين في قضاء القائم/محافظة الانبار. (الجولة الثانية).

Q1: المحافظة: الانبار

Q2: رقم الاستمارة: .....

Q3: الاسم: .....

Q4: الجنس: (1- ذكر 2- أنثى) .

Q5: تاريخ الزيارة: ...../...../2012 .

Q6: تاريخ الميلاد: ...../...../..... .

Q7: العمر: ..... سنة.

..... شهر.

### القياسات الجسمانية

Q8: الوزن: ,  كغم.

Q9: الطول: ,  سم .

اسم و توقيع الشخص الثاني

اسم و توقيع الشخص الاول