

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



Ministry of Health-Nutrition Research Institute  
United Nation Children Fund's



## **Acknowledgment**

This report summarize 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 UNICEF Iraq. The support also provided by the head of nutrition department in the Directorates of Health in the Governorate and is greatly appreciated and was the cornerstone for the success of this survey.

The contribution of field surveyors and data entry staff in conducting the fieldwork and collecting the required data was instrumental to this survey. Their dedication and enthusiasm throughout the process was both significant and remarkable.

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## **Abbreviations**

BMI	Body Mass Index
MoH	Ministry of Health
NRI	Nutrition Research Institute
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nation Children Fund
WHO	World Health Organization

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## **Executive Summary:**

Iraqi-Syrian relations have been marked by their long shared border as well as cultural links. The two countries lie in what was once ancient Mesopotamia; Syrian refugees have continued to flee their homes to neighbouring countries, including Iraq. Syrian refugees are entering Iraq through Al-Qa'im and Al-Waleed (both in Anbar Governorate) and Rabi'aa (Nineveh Governorate) border crossing points as well as through illegal entry points to Sehel (Duhok Governorate). The total number of Syrians who have sought asylum in Iraq stands at 29 441 refugees.

On 18 September 2012, Al-Qa'im border crossing point was reopened. Families with children below 15 year of age, women, elderly, sick and injured persons were allowed to enter Iraqi at a rate of some 120 a day.

A total of 589 children were surveyed between 3<sup>rd</sup> to 7<sup>th</sup> September 2012 in Syrian refugee camp located in Al-Anbar governorate/Al-Qa'im district, with over 99% respondent rate. More than half of the populations were boys (50.8%).

The assessment results shows that (15.1%) of children were stunted (WHO references), that is they have low length/height for her/his age or chronically malnourished. While (7.6%) of children were suffering from general malnutrition "low weight for his/her age" and (4.8%) were wasted or acutely malnourished according to WHO reference. Boys were more likely to be malnourished than girls. Young children, less than one year old are more wasted and underweight than older children.

The nutritional status of children was also assessed by calculating the body mass index for age and the results shows that (5%) of the children were wasted, (1.6%) were severely wasted and (4.1%) 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 will be transferred to the 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 Government of Iraq'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 (UNHCR camp) which includes 93 tents, 5 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, 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). Five 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**

### **Objective:**

- Assess nutritional status of children (6-59) months of age in Syrian refugee families.
- Identify the age groups at highest risk.
- Evaluate 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 Population:**

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

### **Questionnaires:**

Information on nutritional status include simple anthropometric data (Annex 1) like name, weight, height, sex and birth date according to WHO guide on rapid nutritional assessment in emergencies in which additional workload and delay should be considered (3).

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

- One local supervisor takes the responsibility of supervising the field work.
- Five teams comprised from 2 personnel.
- One-day training was done with practical session.
- Five-day data collection at Syrian refugee families' camp.
- Classification of Malnutrition, prevalence of malnutrition and interpretation levels.
- According to WHO All children 6-59 months old were included (3).
- Total (589) eligible children were found and complete data were obtained.

### **Anthropometry**

- Standard uniscale weight measuring scale.
- Standard height/length measuring board.

**Data collection and editing:**

Daily filled forms (questionnaires) from each team were edited by and then handover to central supervision. The central supervision is responsible for reviewing and editing the filled form, assures 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.

**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:**

Table (1) shows the classification of malnutrition rates as a public health problem according to WHO (4).

*Table (1): Classification of Malnutrition, prevalence of malnutrition and interpretation levels according to WHO*

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:

Nutritional assessment carried out on (589) Syrian child and of all (589) children between (6-59) months of age enrolled in the study, (50.8%, 299) child are boys and (49.2%, 290) child are girls 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	46	45	91
	%	50.5%	49.5%	100%
12-23	Count	47	64	111
	%	42.9%	57.1%	100%
24-35	Count	74	65	139
	%	53.2%	46.8%	100%
36-47	Count	65	45	110
	%	59.1%	40.9%	100%
48-60	Count	67	71	138
	%	48.9%	51.1%	100%
Total	Count	299	290	589
	%	50.8%	49.2%	100%

## 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 (7.6%) with no significant difference ( $p > 0.05$ ) between males and females (7.3% and 7.9%) respectively. Severe underweight was observed in (1.9 %) 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 (15.1%), and (5.3%) suffer from severe stunting with no significant differences between males and females ( $P>0.05$ ) (15.2% and 15%) 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, (4.8%) of all children in the sample were below  $-2$  SD of the reference population median and (2.2%) have severe wasting as in Table (3). With a higher prevalence of wasting found in girls (5.6%) indicating a public health wasting problem of significance.

## 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, (4.1%) of children in this survey have overweight with a higher prevalence of overweight can be found in boys (5.1%) and (5%) of the children were wasted with (1.6%) of them suffer from severe wasting as shown in table (3).

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

WHO z-scores				
	WHZ	HAZ	WAZ	BMIAZ
	Wasting	Stunting	Underweight	Overweight
Mean	-0.1	-0.37	-0.31	-0.11
% below -2 SD	4.8	15.1	7.6	5
% below -3 SD	2.2	5.3	1.9	1.6
% above +2 SD	3.3	NA	NA	4.1
<b>Sexes</b>				
Male	4.1	15.2	7.3	5.1
Female	5.6	15	7.9	3.1

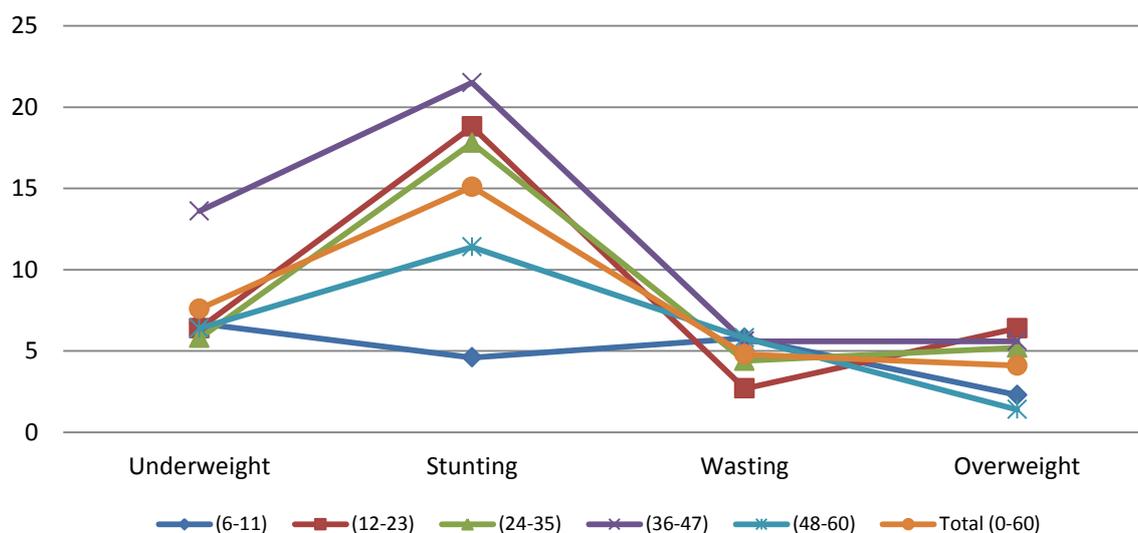
### Age trends for malnutrition Indicators

The prevalence estimates 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 overweight 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 Age groups	Weight-for-age %		Length/height-for-age %		Weight-for-length/height %		BMI-for-age %	
	% < -3SD	% < -2SD	% < -3SD	% < -2SD	% < -3SD	% < -2SD	% > +2SD	% > +3SD
(6-11)	0	6.7	2.3	4.6	1.2	5.8	2.3	0
(12-23)	1.8	6.4	8	18.8	0.9	2.7	6.4	1.8
(24-35)	2.2	5.8	5.9	17.8	2.2	4.4	5.2	0
(36-47)	3.6	13.6	6.5	21.5	2.8	5.6	5.6	1.9
(48-60)	1.4	6.4	3.6	11.4	3.6	5.8	1.4	0
Total (6-60)	1.9	7.6	5.3	15.1	2.2	4.8	4.1	0.7

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



## **Conclusions**

- 1- Wasting, Stunting, Underweight and overweight prevalence rates were (4.8%, 15.1%, 7.6% and 4.1%) 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.
- 3- No significance difference in malnutrition rates between boys and girls.

## **Recommendations**

- 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- Further actions required to monitor the nutritional status of the Syrian refugees especially that related to micronutrient indicators.
- 4- Protecting, promoting and supporting breastfeeding for the vast majority of infants and ensure timely, safe and appropriate complementary feeding.

## References

- 1- Syria Situation Weekly Update No.18, 20-26 September 2012. UNHCR-Iraq.
- 2- Registered Syrian refugees in Iraq in three months; Accessed in 4/10/2012;  
<http://data.unhcr.org/syrianrefugees/download.php?id=830>.
- 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

### Annex (1): Questionnaire form used in the survey.

التقييم التغذوي السريع للأطفال من سن (6-59) شهر في العوائل السورية  
النازحة الى العراق /منطقة القائم

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Q1: رقم الفريق: .....

Q2: رقم الاستمارة: .....

Q3: اسم الطفل: .....

QA: الجنس: .....

Q4: تاريخ الزيارة: ...../...../2012 .

Q5: تاريخ الميلاد: ...../...../.....

Q6: العمر: ..... سنة.  
..... شهر.

**القياسات الجسمانية**

Q7: الوزن :  و  كغم.

Q8: الطول :  و  سم .

اسم و توقيع الشخص الاول

اسم و توقيع الشخص الثاني