

SAVE THE CHILDREN

**MID-UPPER ARM CIRCUMFERENCE SCREENING
IN INFORMAL CAMPS AT THE NORTHERN
GREECE BORDER**

Mid-Upper Arm Circumference Screening in informal camps at the Northern Greece Border: Eko, BP/Hara and Idomeni – 11-14 May 2016

Mid-Upper Arm Circumference (MUAC) is the circumference of the left upper arm, measured at the mid-point between the tip of the shoulder and the tip of the elbow. MUAC is used for the assessment of nutritional status.

- **It is simple and cheap.** It can be used by service providers at different contact points without greatly increasing their workload and it can be effectively used by community-based people for active case finding.
- **It is more sensitive.** MUAC is a better indicator of mortality risk associated with malnutrition than Weight-for-Height. It is therefore a better measure to identify children most in need of treatment.
- **It is less prone to mistakes.** Comparative studies have shown that MUAC is subject to fewer errors than Weight-for-Height.
- **It increases the link with the beneficiary community.** MUAC screening allows referral of children with acute malnutrition to therapeutic or supplementary feeding programmes. The MUAC colour coding is easy to understand for the child's care-taker.



Photo: Gabriele Casini/ Save the Children

Using a 3-colour MUAC tape :

- a measurement in the green zone means the child is properly nourished;
- a measurement in the yellow zone means that the child has moderate acute malnutrition;
- a measurement in the red zone means that the child has severe acute malnutrition.

The cut-offs commonly used are <11.5cm for severe acute malnutrition, and 11.5–<12.5cm for moderate acute malnutrition (The Sphere Handbook).

Indices for children between 6 and 59 months of age

Global Acute Malnutrition (GAM)

The sum of the prevalence of SAM plus MAM at a population level.

	Moderate Acute Malnutrition (MAM)	Severe Acute Malnutrition (SAM)
Weight for height or length	Between -2 and -3 SD or 70th to 79th percentile	Less than -3 SD or below the 70th percentile
Mid-Upper Arm Circumference	11.5–<12.5cm	<11.5cm
Nutritional Oedema	N/A	Bilateral

MUAC SCREENING AT THE NORTHERN GREECE BORDER

Médecins Sans Frontières (MSF) conducted a vaccination campaign in three informal camps in the Northern Greece Border (NGB) area, on the following dates: 11 May in EKO and BP/HARA and from 12 May to 14 May in Idomeni. Associated with the vaccination campaign, a Mid-Upper Arm Circumference (MUAC) screening of children from 6 to 59 months was led by Save the Children (SCI).

One MUAC screener and one MUAC recorder were present at every vaccination line, screening children from 6 months to 59 months using a child MUAC tape of three colours, with cut-off points of 11.5 and 12.5cm, as well as checking for oedema. A total of six teams of two SCI staff each participated in the screening.

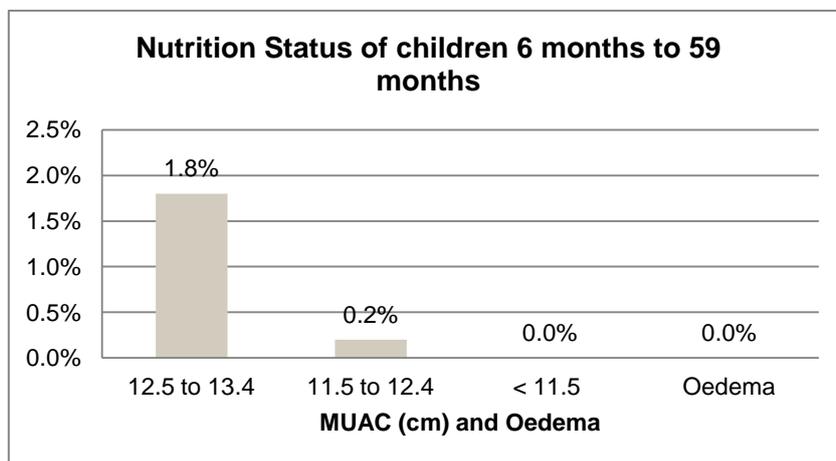
The date of birth or an approximate age was determined by MSF cultural mediators and written down on the vaccination card. The age of the child was confirmed by the SCI staff using a stick with measurements of 65 and 110 cm, and only children measuring between the two marks have been included in this assessment.

A total of 1157 children (48.8% F; 51.2% M) were screened.

The findings showed: MUAC-Proxy GAM: 0.2%; MUAC-Proxy MAM: 0.2% and MUAC-Proxy SAM: 0%. Among the children screened, 1.8% were at risk of malnutrition (MUAC: 12.5 to 13.4 cm).

Table 1: Nutrition status of children 6 months to 59 months

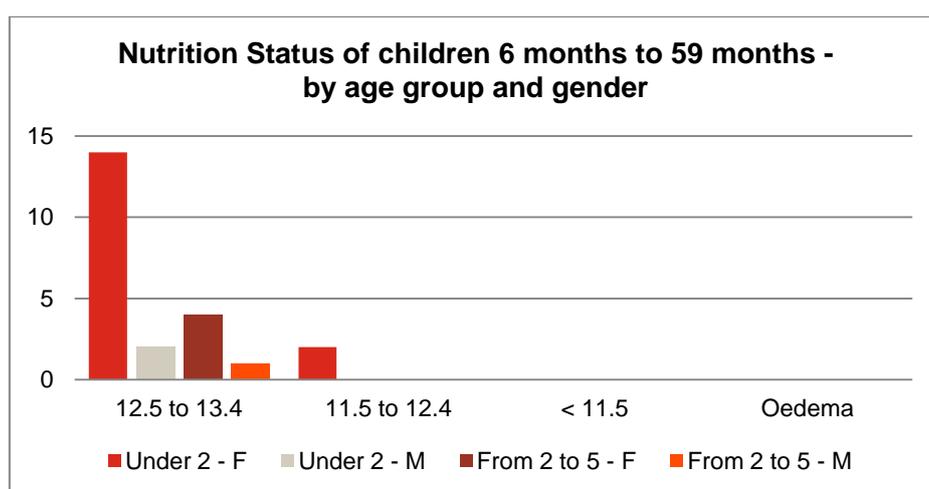
MUAC (cm)	Nutritional status	N= (%)
>13.4		1134 (98.0)
12.5 to 13.4	At risk of Malnutrition	21 (1.8)
11.5 to 12.4	Moderate Malnutrition	2 (0.2)
< 11.5	Severe Malnutrition	0 (0)
Oedema	Severe Malnutrition	0 (0)



The majority of at risk cases (85.7%) and both MAM cases were females. As expected, children under two years old were more at risk of malnutrition than the older children (76.2%). The two MAM cases are aged 8 months and 15 months. This is suggestive confirmation of the need for more appropriate complementary feeding in the camps.

Table 2: Nutrition status of children 6 months to 59 months - by age group and gender

Age Group and Sex	MUAC (cm)				Oedema
	>13.4	12.5 to 13.4	11.5 to 12.4	< 11.5	
Under 2	424	16	2	0	0
Female	205	14	2	0	0
Male	219	2	0	0	0
From 2 to 5	710	5	0	0	0
Female	340	4	0	0	0
Male	370	1	0	0	0
Grand Total	1134	21	2	0	0



While both MAM cases were found in Idomeni camp and the higher proportion of at risk children compared to the total number of children from 6 to 59 months were found in EKO, there is no significant difference between camps.

Following a discussion with the caregivers of the two MAM children, the mother in both cases, it was found that both children of 8 months and 15 months had not, or had not regularly, started complementary feeding. Consequently, their nutritional needs are not being met by their actual food intake. At referral, neither of the children had a medical complication. The caregivers were given a referral slip and asked to go to the MSF clinic on 16 May 2016 and will be followed up by the referral hospital in Thessaloniki.

During the MUAC screening, an in-depth counselling with the caregivers was not possible. Therefore, investigation into the potential barriers to following IYCF best practices will be investigated during the initial counselling and the specific advice closely monitored during the follow-up.

Conclusion and recommendations

The findings of the assessment were **not statistically significant**. There are no plans nationally to conduct MUAC in association with vaccination at this time, as the Ministry of Health would like to move towards an inclusive Expanded Programme on Immunisation (EPI).

SCI, MSF and UNICEF agreed to:

- Reinforce breastfeeding and complementary feeding counselling and support for both children through the Mother-Baby Area or through outreach
- Assess the two children through MSF medical services and referral to Thessaloniki hospital with regular follow up, if agreed with the families
- Depending on the recommendations of the hospital, the availability of specific products will be investigated and the management of the two cases inside the camp through the collaboration of MSF and SCI teams will be ensured

Generally:

- Further focus on complementary feeding support is necessary to prevent risks of acute malnutrition amongst all children under the age of 2 in Greece in both formal/informal sites
- Full IYCF counselling and support for all children under 2 is required
- Monitoring of the risk factors associated with acute malnutrition such as:
 - o Increased morbidity amongst children under 59 months
 - o Food availability and access
 - o Population displacement and density
 - o Visible signs of acute malnutrition

Postscript

Since the MUAC screening took place, the refugees in the informal camp in Idomeni have been relocated, in designated sites mostly around the Thessaloniki region. Save the Children has not yet been able to locate the families of the two MAM cases.

Annexes

Tally Sheet	 MUAC Screening - data collection sheet_
Raw Data	 MUAC Screening NGB_May 2016 DATA