



Background

As of 27 September 2014, there are 619,127 Syrian refugees registered in Jordan; 16% live in camps, and 84% live outside camps.¹

The World Health Organization (WHO) categorizes *Jordan, along with the Syrian Arab Republic*, as *countries in early nutrition transition*, whereby *widespread micronutrient deficiencies* and moderate levels of *undernutrition* in specific populations and age groups exist along with *moderate overweight* and obesity.

The prolonged crisis situation in Syria increases the burden on the health system, undermines food security and calls for careful analysis of nutrition trends to ensure appropriate and timely interventions.²

Nutrition Situation

Malnutrition in children under 5 years of age³

- The latest nutrition survey (April 2014) carried out among Syrian refugees in Jordan shows improvement in the **acute malnutrition situation (wasting)** both in Zaatari camp and outside the camp (figure 1, table 1), rendering it an **acceptable public health situation according to WHO classification**.
- **The prevalence of stunting or chronic malnutrition** in Syrian refugees in Jordan in the camp and outside the camp remains within an acceptable range as per WHO classification (table 1).
- Both wasting and stunting rates found in Syrian refugees in Jordan are lower than those reported in Syria⁴ (11.5% wasting and 27.5% stunting in 2009) but they are comparable to the rates among the Jordanian population⁵ (2.4% wasting and 7.7% stunting in 2012).

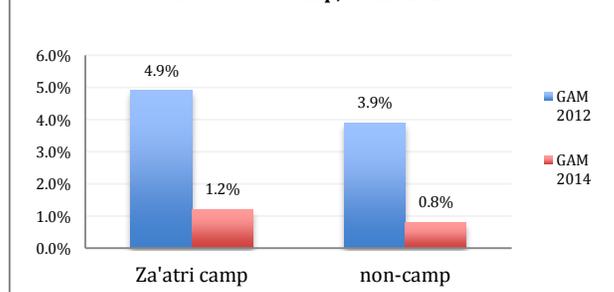
Based on country specific nutrition surveys (Syria Family Health Survey 2009 and Jordan Demographic and Health Survey 2012), **prevalence of overweight (WFH z-score > +2 SD) is 17.9% in Syria and 4.4% in Jordan**. Nutrition/diet-related non-communicable diseases (NCDs) such as **diabetes, hypertension and cardiovascular disease** are also frequently reported among refugees visiting clinics in Zaatari camp – 33% of consultations from January to June 2014 were for NCDs of which diabetes and hypertension each constituted 10%.⁶

Population profile¹

As of 27 September 2014

No. of registered refugees: 619,127
 No. of refugees in Zaatari camp: 79,225
 No. of refugees in Azraq camp: 14,691
 % population below 18 years of age: 52%
 % population below 5 years of age: 18%
 % of women of reproductive age (15-49 years) refugees: 25%
 No. of adolescent girls 12-17 years of age refugees: 40,416 (6.5%)

Fig 1: Trends in GAM prevalence in Zaatari camp and outside camp, 2012-2014



¹ UNHCR, 27 September 2014

² WHO (2011), *WHO MENA Regional Nutrition Strategy 2010-2019 and Plan of Action*.

³ All the nutrition data (wasting, stunting and anaemia) derives from: Preliminary findings of the Interagency Nutrition Assessment Amongst Syrian Refugees in Jordan 2014 and the Interagency Nutrition Assessment Amongst Syrian Refugees in Jordan 2012 (unless otherwise indicated).

⁴ Ministry of Health Syria (2009), *Syria Family Health Survey 2009-2010*.

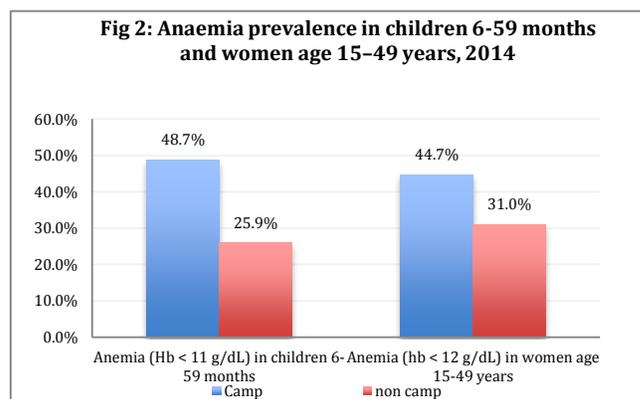
⁵ Department of Statistics (2012), *Jordan Demographic and Health Survey 2012*.

⁶ UNHCR Health Information System Zaatari January to June 2014.

- **Micronutrient deficiencies** (MNDs) remain pervasive among the Syrian refugees living both in and outside camps (figure 2). Amongst children between 6 to 59 months in Zaatari 48.7% are anaemic compared to 44.7% out of the camp. Children under 24 months in Zaatari are at particular risk with 64% anaemic. This indicates a severe and moderate public health situation in and outside the camps respectively.

Maternal nutrition

- Undernutrition in women aged 15–49 years, as measured by mid-upper arm circumference (MUAC) < 23 cm, improved slightly from 2012 to 2014 (not statistically significant) (table 1).
- Anaemia is a severe and moderate public health problem amongst non-pregnant women aged 15–49 years at 44.7% inside Zaatari camp and 31% in non-camp settings respectively (Figure 2). In a Syria pre-crisis nutrition survey, anaemia prevalence was 33% amongst non-pregnant women and 39% among pregnant women.⁷ Similarly, the Jordan micronutrient survey 2010 indicated anaemia as a moderate public health problem among the Jordanian population, with 30.6% of women identified as anaemic. It also found 60.3% of non-pregnant women aged 15–49 years to be Vitamin D deficient and 11% to be Vitamin B12 deficient (200 pg/ml).



Determinants of undernutrition

- **Infant and Young Child Feeding (IYCF):** Data⁸ shows fewer Syrian children aged 0–59 months living outside camps being exclusively breastfed compared to those in camps (table 1). Issues surrounding preference for breast milk substitute (BMS) were reflected in the findings of the Joint Assessment Mission 2013,⁹ which found respondents indicating preference for infant formula over breast milk. Furthermore, data from the 2014 Nutrition Survey (table 1) shows inadequate and inappropriate practices of young child feeding among Syrian refugees in both camp and non-camp settings.
- **Disease profile:** Prevalence of diarrhea as reported in the two weeks prior to the survey is lower in community settings as compared to camps, placing refugees in the camp at higher risk of undernutrition.
- **Food security:** The WFP/REACH Comprehensive Food Security Monitoring Exercise (CFSME)¹⁰ found that 74% of households cited the WFP voucher as their main source of income, underlining the heavy reliance of the refugee households on regular food assistance and thus a great need for the continuation of assistance. It was noted that the fact that only 6% of surveyed refugee households in Jordan were food insecure is primarily due to WFP's food voucher assistance reaching 98% of registered Syrian refugees residing outside of camps. The 2014 CARE assessment¹¹ on the situation of urban Syrian refugees confirmed access to food was not identified as a primary household need again due to the widespread WFP assistance. The CFSME also estimated that the cessation of this food assistance would have a dramatic impact on the food security situation of Syrian refugees as some 85% of refugees in Jordan would not have economic access to sufficient food.
- **Dietary diversity:** The WFP/REACH CFSME 2014 found 75% of children 6–23 months did not meet minimum dietary diversity requirements on the day preceding the data collection.¹² On the other hand, dietary diversity increased significantly with the child's age. More children aged 18–23 months (38%) had an adequate dietary diversity than infants aged 6–11 months (12%). The study indicated a relatively higher consumption of dairy products (77%), followed by eggs (49%) and grains (36%), as well as low consumption of Vitamin A-rich fruits and vegetables (26%), and other fruits and vegetables (20%). Meat and pulses were the least consumed food groups (12% and 10% respectively).

⁷ UNICEF, Syria Profile: <http://www.childinfo.org/files/nutrition/DI%20Profile%20-%20Syria.pdf>

⁸ Preliminary findings of the Interagency Nutrition Assessment Amongst Syrian Refugees in Jordan 2014.

⁹ UNHCR/WFP (2013). Joint Assessment Mission in Jordan.

¹⁰ WFP (2014). Comprehensive Food Security Monitoring Exercise - Syrian refugees in Jordan.

¹¹ CARE (2014). Lives Unseen: Urban Syrian Refugees and Jordanian Host Communities Three Years into the Syria Crisis.

Table 1: Summary of key nutrition indicators¹³

Indicators	Camp		Non- Camp	
	2012	2014	2012	2014
Undernutrition in children under 5				
% GAM (WFH z-score < -2 SD)	4.9 (CI: 3.1–7.6)	1.2 (CI: 0.5–3.3)	3.9 (CI: 2.3–6.7)	0.8 (CI: 0.3–2.2)
% SAM (WFH z-score < -3 SD)	0	0.3 (CI: 0.0–2.4)	0	0.0 (CI: 0–0)
% GAM (MUAC < 12.5 cm)		1.5 (CI: 0.7–3.4)		0.4 (CI: 0.1–1.7)
% SAM (MUAC < 11.5 cm)		0.9 (CI: 0.3–2.9)		0.2 (CI: 0–1.5)
% Stunting (HFA < -2 SD)	16 (CI: 12.6–20.2)	17 (CI: 11.6–24.1)	7.9 (CI: 5.9–10.6)	9 (CI: 6.5–12.3)
% Anaemia in children 6–59 months (Hb < 11 g/dL)		48.4 (CI: 42.0–54.9)		26.1 (CI: 21.3–30.8)
Maternal nutrition				
% Low MUAC in women 15–49 years (MUAC < 23 cm)	6.1 (CI: 4.6–8)	5.1 (CI: 3.4–7.6)	6.3 (CI: 4–8.3)	3.4 (CI: 2.3–4.5)
% Anaemia in women 15–49 years (Hb < 12 g/dL)		44.8 (CI: 38.5–51.0)		31.1 (CI: 27.2–35)
Infant and Young child feeding				
Timely initiation of breastfeeding within 1 hour of birth		57 (CI: 44.5–65.5)		48.7 (CI: 38.1–59.3)
% exclusive breastfeeding (0–5 months)		46.4 (CI: 29.1–63.8)		36 (CI: 22.4–50.0)
% continued breastfeeding at one year (12–15 months)		24.2 (CI: 20.7–37.8)		39.5 (CI: 22.2–56.7)
% continued breastfeeding at two years (20–24 months)		15% (CI: 1.2–28.8)		23.8 (CI: 9.9–37.7)
Introduction of solid, semi-solid or soft food (6–8 months)		42.1 (CI: 22.9–61.3)		36.4 (CI: 14.8–57.9)
Consumption of iron-rich or iron fortified foods (6–23 months)		28.7 (CI: 17.9–39.4)		21.9 (CI: 14.5–29.4)
Formula feeding in children (0–23 months)		9.8% (CI: 5.7–13.9)		16.1 (CI: 11.3–20.8)
Health Profile				
Diarrhea in the past 2 weeks		27 (20.6–33.4)		14.5 (10.6–18.4)

- Health services:** Uptake of health services among refugees living outside the camps is high, with 95.6% of those in need of health services in the preceding four weeks seeking care; of those who sought healthcare, 90% were able to receive the required services. Among pregnant women, 86% reported having received antenatal care at some stage during their pregnancy.¹⁴
- WASH:** On average three-quarters of Syrian households in host communities are accessing piped water. However, over half of these are receiving water less than once a week. Most of the refugees have access to acceptable toilets. For those living in informal settlements, three-quarters of tents do not have a latrine, and open defecation is common.¹⁵ Furthermore, sewage services only cover about one-third of the population and mainly in urban centers. According to the interagency WASH assessment in Zaatari camp, 80% of respondents wash their hands five times or more per day, and 98% use soap to wash their hands.¹⁶

¹³ All the nutrition data (wasting, stunting and anaemia) derives from: Preliminary findings of the Interagency Nutrition Assessment Amongst Syrian Refugees in Jordan 2014 and the Interagency Nutrition Assessment Amongst Syrian Refugees in Jordan 2012 (unless otherwise indicated).

¹⁴ UNHCR/JHAS (2014), Prospective surveillance in non-camp refugee households on Knowledge, Access and Optake of health services – Baseline survey – 2014 (presentation).

¹⁵ UNICEF, ACTED, Relief International, Oxfam, MercyCorps (2013), WASH in Host Communities in Jordan: An interagency assessment, September – October 2013.

¹⁶ ACTED, JEN, Oxfam, UNICEF (2013), WASH Sector Knowledge, Attitude and Practices Survey in Za'atari Refugee Camp, November 2013.

Response: Current Services and activities

Table 2: Response: Services, activities and key partners

What?	How?	Activities:	Who?
1. Policy, strategy, and guidelines	Support in development of appropriate and adequate policies, guideline and strategies	Protocol on Integrated Management of Acute Malnutrition developed by Nutrition Sub-Working Group (NWG)	MEDAIR, JHAS and SCJ
		Guidelines 'Guidance Notes on Appropriate IYCF Practices in the Current Refugee Emergency in Jordan' developed by NWG and approved by Ministry of Health (MoH)	NWG
		Standard Operating Procedures on 'Donations, Distribution, and Procurement of Infant Formula and Infant Deeding Equipment in Syrian emergency in Jordan' developed by NWG and approved by MoH (initial in 2012 and updated 2014)	NWG
		National Operating Guidelines for Control of Iron Deficiency Anaemia among Pregnant women developed by NWG and pending approval by MoH	SCJ and JHAS
		Call for Support for Appropriate Feeding of Infants and Young Children in the Syrian Emergency at the Entry points/borders	NWG
2. Treatment of acute malnutrition	Selective Feeding: Supplementary feeding programme (SFP) and therapeutic feeding	Screening of acute malnutrition	SCJ IMC Medair/JHAS
		Management of moderate acute malnutrition in children aged 6–59 months	SCJ IMC Medair- JHAS
		Treatment of severe acute malnutrition (SAM) (out-patient and in-patient) in children 6–59 months through Out-Patient Programme (OTP) using Plumpy Nut	UNHCR/JHAS UNHCR/IMC UNHCR/Medair/JHAS
		Institutional capacity building on SAM inpatient treatment at University Hospital	Medair/JHAS
3. IYCF	Promote and support breast-feeding and adequate complementary feeding	Community outreach activities including counseling, and sharing of information on IYCF	UNICEF/SCJ Medair ACF IMC
		Implementation of BMS code including support for re-lactation, provision of BMS in required cases/monitoring of infant formula prescription and dispensing	UNICEF/SCJ/JHAS UNHCR/IOM
5. Micronutrient Deficiency Control	Prevent or correct micronutrient deficiency (MND)	Supplementation with iron and folic acid and vitamin A	UNHCR-UNFPA/JHAS UNHCR/IMC
		Capacity building activities through training of health and community workers to detect, manage and refer severe MND	Medair
		Flour fortification (national flour fortification activity)	MoH
		Community outreach through awareness-raising and communication activities	Medair IMC
6. Survey and surveillance		Nutrition surveys	UNHCR WFP UNICEF UNFPA WHO Implemented by Medair
		Nutrition surveillance system	SCJ/Medair

Key Challenges

- Most refugees depend on WFP vouchers as their main source of income, and the increasingly **limited funding** scenario may hamper the ability of agencies **to maintain general food voucher distribution**.
- **Sub-optimal IYCF practices in pre-conflict Syria** where only 43% of infants 0–59 months were exclusively breastfed and where BMS were widely present pose challenges for control in the usage of BMS during crises. There are also continuous donations of infant formula and uncontrolled distribution, despite attempts to enforce the BMS code, making it difficult to protect exclusive breastfeeding in infants below 6 months old. Furthermore, poor knowledge of health providers on IYCF, particularly on the importance of breastfeeding, poses challenges to appropriate messaging on IYCF.

Way forward (Future priorities)¹⁷

According to the Nutrition Response Interventions Strategy for Syrian refugees and vulnerable host community in Jordan, developed by the NWG in 2014, the priority of the NWG in Jordan will be to focus on activities that prevent and treat malnutrition, with emphasis placed on IYCF practices and MND prevention and control. Priority strategies aim to promote optimal nutrition throughout the life-cycle by implementing age-appropriate interventions, focusing particularly on the most vulnerable—including children 0–59 months, pregnant and lactating women and women of reproductive age, older people and vulnerable groups with special nutrition needs.

- To strengthen efforts to ensure appropriate IYCF practices through protection, promotion and support of breastfeeding and timely, adequate and safe complementary feeding of infants and young children through scaling up IYCF activities and strengthening mechanisms to monitor the progress.
- To encourage and support food-based strategies to address MND, such as flour fortification, provision of fortified blended food supplements and promotion of dietary diversity through innovative approaches.
- To ensure optimal maternal and child micronutrient status through supplementation before and during pregnancy, and age-appropriate micronutrients supplementation to children aged 0–59 months. The strategy will also focus on identifying and treating those at highest risk such as pregnant women with severe anaemia.
- To maintain efforts to prevent and treat acute malnutrition through timely screening of nutrition status, provision of blanket supplementary feeding to children aged 6–24 months, targeted supplementary feeding to moderately malnourished children aged 6–59 months, and therapeutic feeding to severely malnourished children aged 6–59 months.
- To support nutrition related capacity building activities in the health sector in Jordan.
- To ensure that nutrition requirements of older people and those with special nutritional needs are addressed.
- To continue monitoring the nutrition situation among refugees in Jordan through periodic surveys and the status of nutrition in new arrivals.



¹⁷ Refer to the Jordan Nutrition Response Intervention Strategy 2014 for detailed strategy