# SPECIAL REPORT: Yida Camp Survey Results

August 6, 2012

## *Survey suggests rising malnutrition and child mortality in Yida Camp*

**Key Messages**

- As a result of conflict in Sudan, the Yida camp in South Sudan now hosts nearly 60,000 refugees, with 300-500 new arrivals each day. Refugees arrive in poor condition, and the water/sanitation situation is deteriorating, in part due to the onset of seasonal rains. A FEWS NET nutrition and food security survey conducted in early July 2012 suggests that both malnutrition and child mortality have reached emergency levels.

- The survey results indicate a GAM prevalence of 21.8 percent and a SAM prevalence of 6.1 percent (WHO). The GAM prevalence is higher than the WHO Emergency threshold of 15 percent.

- The crude death rate over the 90 days preceding the survey is estimated at 0.76/10,000/day. The death rate for children under 5 years of age during this same period is estimated at 2.15/10,000/day. The child death rate is especially concerning given that the survey data indicates an increasing frequency of child mortality over the past three months.

- Prompt action by national and international partners is required. Better access to water, improved sanitation facilities, an expansion of nutrition treatment programs, and improved screening for malnutrition are priorities.

**Background**

The population of South Kordofan, Sudan has been heavily affected by conflict between the Sudan Armed Forces and the Sudan People's Liberation Movement-North. This conflict has driven thousands of residents of South Kordofan across the border into Unity State of South Sudan. Most refugees have settled in the Yida refugee camp in northern Pariang County, near the border with South Kordofan.

Managed by UNHCR, the Yida camp now hosts nearly 60,000 refugees, double its April population (27,500). Some 300-500 new refugees are arriving daily, many of them reaching the registration point exhausted, weak, and even malnourished. Much smaller numbers of refugees have settled in Nyiel and Pariang.

A number of organizations are responding to humanitarian needs in the camp. These include UNHCR, WFP, MSFF, IRC, Samaritan Purse, CARE, Non-violent Peace, and Solidarités. Their services are focused on primary health care, nutrition, WASH, food aid/distribution, protection, shelter, education, and reproductive health. The onset of rains has complicated an already challenging response by limiting access to Bentiu, the nearest transport and communication hub, and by eroding water and sanitation conditions.

Given the increasing size of the refugee population and concerns with deteriorating conditions, FEWS NET conducted an integrated nutrition and food security survey in Yida Camp between 2nd and 11th July, 2012. Data collection and analysis were led by ACF, a FEWS NET subcontractor.

**Table 1.** Planning data for Yida nutrition survey

| Data entered on ENA software | Anthropometric survey | Retrospective mortality survey |
|---|---|---|
| Estimated prevalence | 22% | 1 |
| Desired precision | 4% | 0.5 |
| Design effect | 1 | 1 |
| Recall period | | 90 days |
| Average household size | 5 | 5 |
| Percent of under five children | 18% | |
| Percent of non-respondent | 4% | 4% |
| Households to be included | 577 | 387 |
| Children to be included | 449 | |
| Population to be included | | 465 |

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**Methodology**

This integrated nutrition and retrospective mortality survey utilized the Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology. Both anthropometric and mortality data were collected. Food security and WASH questionnaires were administered in each selected household as per the South Sudan Nutrition Cluster guidelines. Infant and Young Child Feeding (IYCF) information was collected from households with children under two years using a structured questionnaire. A two-stage cluster sampling design was employed. Cluster selection used probability proportional to size (PPS) design. Second stage selection (Household) utilized a modified EPI method.

The sample size for both anthropometric and retrospective mortality survey was determined using ENA software (version delta) and the data presented in Table 1. A conservative estimate of GAM (22 percent) was used, relative to historical levels of acute malnutrition among the local resident population, as most of the refugees arrived some time ago and have had some access to food aid and nutrition services. After four days of training, the teams spent six days in data collection. Each of the six teams surveyed ~18 households per day per team, for a total of 637 households; slightly more than suggested by ENA. Following data collection, survey results were validated by the South Sudan Nutrition cluster.

**Nutrition and Mortality Results**

- Survey results indicate a GAM prevalence of 21.8 percent and a SAM prevalence of 6.1 percent (WHO). The GAM prevalence is higher than the WHO Emergency threshold of 15 percent.
- The crude death rate over the 90 days preceding the survey is estimated at 0.76/10,000/day. The death rate for children under 5 years of age during this same period is estimated at 2.15/10,000/day. The child death rate is especially concerning given that the survey data indicates an increasing frequency of child mortality over the past three months.

**Table 2.** Table of Anthropometric Results

| Index | Indicator | | Results |
|---|---|---|---|
| **WHO (2006)** (n=630) | Z-scores | Global Acute Malnutrition *W/H< -2 z and/or oedema* | **21.8**% (17.2 - 27.3 95% CI) |
| | | Severe Acute Malnutrition *W/H < -3 z and/or oedema* | **6.1**% ( 4.0 - 9.1 95% CI) |
| **NCHS (1977)** (n=630) | Z- scores | Global Acute Malnutrition *W/H< -2 z and/or oedema* | 21.7% (16.8 - 27.6 95% CI) |
| | | Severe Acute Malnutrition *W/H < -3 z and/or oedema* | 2.5% ( 1.4- 4.3 95% CI) |
| **Crude Death Rate** | | | **0.76**/10,000/day (0.47 - 1.23 95% CI) |
| **Under five Death Rate** | | | **2.15**/10,000/day (1.31 – 3.50 95% CI) |

- Health indicators among households with children under 5
  - Vitamin A coverage (Yes: 21.6%, No: 78.4%; N=907)
  - Measles coverage (Yes with EPI card: 80.3%, Yes by recall: 6.2%, No: 13.6% N=907)
  - Illness in the preceding two weeks (Yes: 74.5%, No: 25.5%; N=907)
  - Reported illnesses (Fever: 19.6%, Cough: 31.8%, Diarrhea: 35.2%, Skin infections: 2.4%, Eye infections: 8.1%, Other: 2.9%)
  - Treatment sought (PHCC/PHCU: 61.5%, None sought: 38.2%)
  - Did the child sleep under a mosquito net the preceding night? (Yes: 39.1%, No: 60.9%)
- Almost all respondents reported WFP food aid as the main source of food. The main food groups eaten were cereals and pulses with very limited protein sources, vegetables, or fruits.
- Nearly 90 percent of camp residents access water from seven boreholes (four mechanized pumps and two hand pumps). The remainder reporting using streams and ponds.
- Waiting time at water points was reported to be a significant challenge with 45 percent of respondent households spending more than two hours per day collecting water.
- A considerable proportion of the community (53.7%) uses unimproved sanitation facilities (designated and undesignated bush area).

More detailed results and analyses will be presented in a larger report to be released in August.

**Next Steps**

The observed prevalence of acute malnutrition in Yida refugee camp is high, and mortality rates, especially in children below five years, are worrying. The poor sanitation and hygiene situation suggests that further deterioration is possible. Prompt action is required, including:

- Improvements to water access and water quality
- Additional latrine construction
- Sanitation and hygiene promotion activities in the camp
- A scaling-up of nutrition interventions in the camp
- Increased screening of children for malnutrition and referral for early treatment.
- Increased community mobilization activities and continued creation of community awareness of malnutrition prevention, treatment, and OTP sites.
- Interventions to improve dietary diversity and offset high milling costs