

International Medical Corps - Uganda
Emergency Health and Nutrition Response in Northern Uganda
Final Report: July 21, 2003 to January 31, 2004

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Program Overview

Program Goal:	To reduce the impact of the current crisis on the health of the populations of Kitgum and Pader districts.
Program Objective:	Objective 1: To increase access to preventative and curative health services for vulnerable populations in Kitgum and Pader. Objective 2: To provide therapeutic and supplementary feeding to moderate and severely malnourished children under five years of age in Kitgum and Pader Districts.
Number/type of beneficiaries targeted:	Internally Displaced Persons 119,500 persons in Kitgum District, 99,400 persons in Pader District
Geographic areas of activity:	Kitgum District, Pader District

PROGRAM OVERVIEW AND PERFORMANCE

I. Executive Summary

Key expatriate staff for the program arrived in Kampala on August 5, 2003. Introductory meetings were held with Ministry of Health officials, partner NGOs and UN agencies in Kampala and Kitgum. From August to September, premises for the offices were rented both in Kitgum and Kampala, program supplies were procured and support staff members were hired.

In September, the main activities conducted included trainings for the mobile clinic team, traditional birth attendants (TBAs) trainers and nutrition staff for Kitgum district. All trainees were drawn from the Ministry of Health in Kitgum. Similarly, training for staff in Pader district began at the end of September; the delay was due to a measles campaign in the district.

This report covers the program activities from August 2003 to January 2004.

A. Program Achievements

- 35,978 consultations provided by mobile teams in the two districts
- 27,039 children vaccinated in Pader and Kitgum districts
- 114 traditional birth attendants retrained and supplied with safe delivery kits
- 3,081 women received tetanus immunization
- 14 MOH staff from the two districts trained in the provision of mobile health services
- 35 MOH staff from the two districts trained in the management of nutrition programs (28 in supplementary feeding program and 7 in therapeutic feeding programs)
- 1,049 children attended supplementary feeding programs in Kitgum and Pader districts
- 148 children admitted into the therapeutic feeding center in Kitgum and Pader district

B. Security

The lack of security in the two districts, Kitgum and Pader, formed the biggest impediment to a smooth implementation of the program. The Lord's Resistance Army (LRA) kept up small and larger scale attacks, ambushes, and abductions and penetrated into neighboring districts of Soroti, Katakwi, and Lira. Roving bands of the LRA used Kitgum and Pader districts as a corridor between their bases in Southern Sudan and the latter three districts. Kitgum town also suffered a number of attacks. The Uganda People's Defense Force (UPDF) has been engaging the LRA, at times pursuing them into South Sudan, and has killed a number of top-level commanders. Nevertheless, between August 2003 and January 2004, the LRA actually stepped up activities and became bolder, despite claims by the UPDF on various occasions to have as good as defeated them. The creation of local defense units and local militias, which were meant to support the UPDF and supplement any shortfall in their capacity to protect civilians, has in fact contributed to disorder and insecurity. Due to the insecurity, IMC staff can only travel as part of World Food Programme convoys, which are under protection of UPDF escorts.

C. Areas of Activity

Table 1: Geographic location of all major program activities

District	IDP camp	Activity	POPULATION			
			Total	Under 5 year old	Women of child bearing age	Pregnant women
Kitgum	Palabek Gem	mobile clinic	12,613	3,153	2,900	630
	Lokung	mobile clinic	20,360	5,090	4,682	1,018
	Padibe	TFC and mobile clinic	31,113	7,778	7,155	1,555
	Potika A and B	SFC and mobile clinic	7,940	1,985	1,826	397
	Agoro	SFC and mobile clinic	3,642	910	837	182
	Kitgum Matidi	SFC and mobile clinic	12,005	3,001	2,761	600
	Omiya Anyima	mobile clinic	17,076	4,269	3,927	853
	Mucwini	SFC	14,702	3,675	3,381	735
Pader	Pajule	SFC, TFC and mobile clinic	26,737	6,684	6,149	1,336
	Patongo	SFC and mobile clinic	40,816	10,204	9,387	2,040
	Puranga	SFC and mobile clinic	11,937	2,984	2,745	596
	Attanga	SFC and mobile clinic	19,917	4,979	4,580	995
	Lira Palwo	mobile clinic	16,753	4,188	3,853	192
	Adilang	mobile clinic	12,000	3,000	2,760	138
	Acholibur	mobile clinic	19,000	4,750	4,370	218

*SFC - Supplementary Feeding Center

*TFC - Therapeutic Feeding Center

II. Program Overview

Program Goal

Reduce the impact of the current crisis on the health of the populations of Kitgum and Pader districts.

Program Objectives

Objective 1: To increase access to preventative and curative health services for vulnerable populations in Kitgum and Pader.

Objective 2: To provide therapeutic and supplementary feeding to moderate and severely malnourished children under-five years of age in Kitgum and Pader Districts.

Program Beneficiaries

The target beneficiaries of this program were the internally displaced of Kitgum and Pader districts. In the proposal, their number was estimated at 134,352 and 242,154 respectively (December 2002 estimates). According to UNOCHA data, these figures fluctuated from 105,058 and 229,115 in July 2003 to 237,269 and 229,115 in January 2004.

During this grant period, 266,611 IDPs - 119,451 in eight Kitgum IDP camps and 147,160 in seven Pader IDP camps – benefited from the program. The specific breakdown of beneficiaries reached per objective is as follows:

Objective 1:

- 35,978 consultations provided by the mobile clinics
- 27,039 children immunized
- 3,081 women received tetanus immunizations

Objective 2:

- 148 children admitted to the TFCs
- 1049 children received by the SFCs

Objective 1: To increase access to preventative and curative health services for vulnerable populations in Kitgum and Pader.

E.R. 1.1 EPI coverage increased by 20% in Kitgum and Pader

Provision of mobile clinic sessions and support of vaccination services

In both Kitgum and Pader, IMC together with the District Director of Health Services (DDHS) identified sites for mobile clinics as well as supplementary and therapeutic centers, based on IMC's health and nutrition assessment conducted from April 24-25, 2003. Camps with large populations and non-functional health centers were given high priority when selecting sites for mobile clinics.

For both districts, IMC conducted a leader's awareness workshop, which was held in Kitgum town. During this workshop, the planned activities within the district were explained to the community leaders. From September to October 2003, IMC together with MOH in Kitgum and Pader identified and trained 14 (7 per district) Trainers of Trainers (TOTs) for the provision of integrated mobile health services in 7 IDP camps located in Kitgum. IMC's nurse with assistance from MOH senior staff in Kitgum and Pader districts conducted the training. Topics covered included: primary health care (PHC), components and methodology, target diseases and their management, cold chain management, information, education and communication (IEC), record keeping, monitoring and evaluation, immunization, maternal and child health, family planning, clinical management, and STI/HIV/AIDS. The training was conducted by using several teaching methods, such as lectures, group and plenary discussions, and questions and answers.

In all fourteen sites in both districts, the DDHS provided staff, while IMC provided basic equipment and materials for the clinics. Equipment and materials provided included: blood pressure machines, stethoscopes, otoscopes, oroscopes, weighing scales and height boards. The two IMC mobile clinics were equipped with these same items in addition to stretchers, basic drugs, and radio equipment.

IMC supported the DDHS cold chain by performing maintenance and repairs of the fridges, refilling gas cylinders for the fridges, and by transporting vaccines and gas cylinders.

Table 2: Morbidity pattern in Kitgum and Pader district (July 2003 to January 2004)

Non-communicable diseases	0-4 yrs	5 yrs and over	%
Malaria	5,608	5,010	29.5
Cold/cough (no pneumonia)	3,341	4,183	20.9
Intestinal worms	1,097	1,626	7.6
Skin diseases	4,336	2,389	18.7
Diarrhea - not bloody	1,663	1,524	8.9
Eye infection	706	553	3.5
Pneumonia	255	158	1.1
Anemia	304	321	1.7

35,978 consultations were provided by the mobile clinics in the two districts. As presented in Table 2, malaria contributed to the highest cause of morbidity (29.5%), followed by colds/cough (20.0%) and skin diseases (18.7%).

In both Kitgum and Pader, Malaria Consortium East Africa (MCEA) and International Rescue Committee have been responsible for malaria control activities through the provision of insecticide treated nets and pre-packed drugs for home-based treatment of malaria. IMC has

liaised with the two organizations for the distribution of insecticide treated nets. Pregnant women were able to access malaria prophylaxis through the mobile clinics.

Malaria is also the highest cause of mortality in the two districts. Health education sessions were conducted during the mobile clinic sessions; these were conducted with use of various teaching aids, e.g. posters and flip charts. Various topics were covered during these sessions, including hygiene, malaria control, and diarrheal diseases.

Vaccinations

During this program, 27,039 children received immunization through the mobile clinics in the two districts. IMC supported immunization activities by offering support, i.e. by transporting vaccines and office supplies, repairing fridges, and conducting refresher training for vaccinators. During the national mass measles campaign in November 2003, IMC supported the DDHS in community sensitization within the camps that were covered by IMC's activities.

Yellow Fever vaccination campaign

Table 3: Yellow Fever Vaccination Campaign

Location	Target Population	Number Vaccinated	Coverage
Lokung	20,768	16,199	78%
Agoro	16,982	12,906	76%
Palabek Kal	12,828	9,364	73%
Total	50,578	38,469	76.1%

On May 15, 2003, a Yellow Fever outbreak was confirmed in the Southern Sudan region (Imotong Payam) bordering Kitgum district of Northern Uganda. The Ministry of Health and the World Health Organization in Uganda responded by mobilizing the community through the local media and by distributing IEC material. Between November 13 and

November 15, 2003, a Yellow Fever campaign was carried out in Kitgum counties bordering Imotong Payam. This campaign targeted a population of 100,000 people older than 9 months of age. The World Health Organization donated the vaccines for the campaign and the Ministry of Health was in charge of the logistics and provision of personnel for the survey. Due to budgetary constraints, the Ministry of Health requested IMC to support the vaccination campaign by training vaccinators and distributing vaccines in the three IDP camps of Agoro, Lokung and Palabek Gem, which are located within the target region. The campaign covered 76.1% of the target population in the three IDP camps: 38,469 people older than 9 months were vaccinated.

E.R. 1.2 Access to Traditional Birth Attendants increased by 20% for pregnant women in Kitgum and Pader

IMC identified community leaders who were in charge of the Rural Health Facilities and through them, selected thirty long-serving TBAs (fifteen per district) to attend the training of trainers course held in Kitgum from September 8-12, 2003. The selected TBAs had received some training by the Ministry of Health to improve their skills, practice and knowledge. In each district, two TBAs were selected from each of the six camps, and the remaining three were selected from the most highly populated camp.

IMC's nurse, together with District Health Facilitators, conducted the training. Some of the topics covered during the training included: risk factors in pregnancy, personal hygiene, minor disorders in pregnancy, danger signs in pregnancy, antenatal care, examination of pregnant mothers, history taking, preparation for the baby, signs of labor, care during the first stage of labor, care during second stage of labor, delivery under clean and hygienic conditions, delivery of the placenta, care of mother after delivery, care of the newborn baby, clean up after delivery, use of herbs and medicines in pregnancy, common post-partum complications, referrals, immunization, family planning, health education, dissemination of IEC materials, record keeping, and STIs/HIV/AIDS. Some of the teaching methods that were used during the training included plenary sessions, demonstrations and role play, practice in real situations, and lectures with questions and answers. These TBAs retrained other TBAs in their respective camps. IMC supplied safe delivery kits to all the trained TBAs; 119 kits were distributed.

By January 30, 2004, 119 TBAs had been re-trained and supplied with safe delivery kits, fulfilling IMC's target of providing training and kits to at least 100 TBAs in the two districts. IEC materials were also developed, in cooperation with the DDHS and the MOH, and utilized by the mobile clinics and the TBAs. Topics of the materials included: immunizations, self-delivery, pregnancy and nutrition.

Each mobile clinic offered antenatal and postnatal care. High-risk cases were normally referred to comprehensive health facilities for further management. During this grant period, 2580 women received antenatal care.

Table 4: Tetanus Immunization

	Pregnant women	Non Pregnant women	Total
Dose 1	669	486	1,155
Dose 2	456	284	740
Dose 3	328	175	503
Dose 4	267	159	426
Dose 5	135	122	257
Total	1,855	1,226	3,081

Through the mobile clinics, women of reproductive age were able to access tetanus immunizations. During this period, 3081 women received tetanus immunizations. Pregnant women were 60.2% of the total.

Comparison of TBA access, August 2003 – January/February 2004*

Table 5: Percentages increase in activity and coverage

	August 2003	Jan/Feb 2004	Change	%Change
Antenatal clinic visits, new attendances	546	1303	+ 757	+ 139%
Antenatal clinic visits, re-attendances	829	981	+ 152	+ 18%
Antenatal clinic visits, total	1375	2284	+ 909	+ 66%
Deliveries by TBAs	102	347	+ 245	+ 240%

* In many cases, figures for January were not available or incomplete. In those cases, February figures have been used.

Objective 2: To provide therapeutic and supplementary feeding to moderate and severely malnourished children under five years of age in Kitgum and Pader Districts.

In September and October 2003, IMC, MOH Kitgum and Pader, and the World Food Program conducted a baseline nutrition survey in the two districts. IMC provided the technical support while World Food Program provided logistical/security support. MOH staff members from the two districts were directly involved with data collection in the various camps. It had been envisaged to conduct a 30x30 cluster survey for this purpose but due to access and security limitations, this turned out to be not feasible. The baseline survey was conducted through a random sampling method instead.

This survey revealed that Kitgum district had a severe acute malnutrition rate of 7.4 % (confidence interval 6.4%-8.6%) and global malnutrition rate of 12.4 % (confidence intervals of 11.1% -13.9%). In Pader district, the severe acute malnutrition rate was 9.4% (confidence intervals of 8.3%-10.6%) and the global malnutrition rate was 10.3 % (confidence interval 9.2%-11.5%).

In both districts, results of the retrospective mortality analysis indicated that the majority of the deaths were due to fever, measles (a measles outbreak had been reported in the area during July), and acute respiratory infections (ARIs). Many cases of bloody diarrhea were also reported. The report indicated high level of worm infestation, limited access to safe water (both in quality and quantity), poor access to health services and poor childcare and feeding practices. More information can be found in the *Attachment: Summary of the Nutrition Surveys in Kitgum and Pader Districts.*

E.R. 2.1 Increase therapeutic feeding centers for severely malnourished children by one center in each district

After discussions with the DDHS in Kitgum district, Padibe was selected as the site for the therapeutic feeding center. The only other therapeutic center in the district is located in St. Joseph Hospital in Kitgum town. This center was congested, as it is the only one in the district.

In Pader district, Pajule was chosen as the site for the therapeutic feeding center, since the district has only one center located in Kalongo. Access to Kalongo by most malnourished children in the IDP camps was very limited due to insecurity; the roads to Pajule were considered to be less insecure.

For the feeding centers, IMC supplied two TFC start-up kits, two Rubb Hall tents, and equipment and supplies such as weighing scales, height boards, soap, disinfectant and other cleaning agents. IMC and a MOH nutritionist conducted a training for fourteen DDHS staff members (seven from each district) on the management of the centers. Both centers became fully functional in November 2003.

IMC signed a Memorandum of Understanding (MOU) with UNICEF for the supply of Resomal, BP 5, F75 and F100. Under this memorandum, IMC has to incur the cost of transporting the donated supplies from Kampala to Kitgum. A similar MOU was also signed with the World Food Program for the supply of food for the caretakers of these children. IMC reported on the utilization of the donated supplies on a monthly basis to UNICEF. IMC also participated in monthly health and nutrition coordination meetings that were held in Kampala and were chaired by UNICEF and the Ministry of Health.

In order to improve water and sanitation within the feeding centers, IMC liaised with International Rescue Committee (IRC), which has water and sanitation programs in both districts, for the provision of water and latrines. Hygiene promotion has also been carried out by IRC at the feeding centers.

Table 6: Activities at Padibe and Pajule Therapeutic Feeding Centers, end of January 2004

Class of Age	Total beginning of the month (A)	Admissions						Discharge					TOTAL end of the month (I)
		W/H<70% MUAC<11 BMI<16	Oedema	Relapse*		Others (to be specified)	TOTAL new (B)	Cured (D)	Death (E)	Default (F)	Medical transf. (G)	Total (H)	
				Mar	Kw								
<6 months	7	0				0	4		2	0	6	1	
6-59 months	36	74	20	2		96	42	2	9	0	53	79	
5 - 10 years	2	3	3	1		7	1		3	0	4	5	
Adolescents 11-17 yrs	0	0				0	0			0	0	0	
Adults 18+ years	0	0				0	0			0	0	0	
TOTAL	45	77	23	3	0	103	47	2	14	0	63	85	
* Relapse includes children previously cured but relapsed to a state of severe malnutrition							74.60% (D/H)	3.10% (E/H)	22.20% (F/H)	0% (G/H)			

By the end of this period, 148 children had been admitted to the therapeutic feeding centers in the two districts. The death rates at the centers were 3.1% while the default rate was 22.2% and the cure rate was 74.6%. In order to decrease the default rate, food rations have been offered to caretakers of the children admitted to the centers. During the time that the children were admitted, caretakers were offered nutrition health education.

E.R. 2.2 Increase supplementary feeding centers for moderately malnourished children by four centers in each district

After consultations with the DDHS in the two districts, four sites for establishment of supplementary feeding centers (SFC) were selected in each district. The DDHS provided staff for the centers and IMC provided training and technical inputs in the management of the centers.

IMC provided the necessary start-up equipment and materials for the eight SFCs, including scales, height boards, MUAC tapes, ledgers and other stationery. In September 2003, IMC and the MOH nutritionist conducted a training for twenty-eight DDHS staff from Kitgum and Pader districts on the management of supplementary feeding centers.

A Memorandum of Understanding was signed with World Food Program for the provision of food materials for these centers. Under this MOU, the World Food Program has been responsible for the supply and transportation of corn-soy-blend (CSB), oil and sugar for the feeding centers. Each center has offered weekly dry rations to children under five years of age, lactating mothers, and pregnant women in their third trimester. Before receiving their food rations, mothers were offered information and advice on how to prepare the food rations and on nutrition health education. IMC and the DDHS prepared IEC materials on immunizations, self-delivery, pregnancy and nutrition, which are easy to understand. Promotion of breastfeeding and appropriate weaning practices were also carried out during these sessions. In both districts, HIV/AIDS patients were not included in the feeding programs since they received nutrition inputs under a separate program run by AVSI (the Italian NGO *Associazione Volontari per il Servizio Internazionale*).

Most of the supplementary feeding centers became fully functional in December 2003. The major cause for the delay in the establishment of fully functional centers was that CSB in the World Food Program stores in Kitgum was not available until December; when CSB was available, there was a shortage of sugar.

Table 7: Activity at supplementary feeding centers in Kitgum district, end of January 2004

CATEGORY	No. Enrolled (end last month)	Admissions	Defaulters	Medical transfer	Deaths	Discharges (this month) (over 85%)	Total discharges	Total end of this month
0-5 years (up to 115cm height) (71-80 %standard weight for height)	734	86	4	6	1	40	51	769
Pregnant women (last trimester)								
Lactating women	22	7						29
Elderly (as necessary)		10						10
Others, e.g. children 6-14 years of age	4	12	2	0	0	0	2	14
Total	760	115	6	6	1	40	53	822

Table 8: Activity at supplementary feeding centers in Pader district, end of January 2004

CATEGORY	No. Enrolled (end last month)	Admissions	Defaulters	Medical transfer	Deaths	Discharges (this month) (Over 85%)	Total Discharges	Total end of this month
0-5years(up to 115cm height)(71- 80 %standard weight for height)	128	224	5	10	1	56	72	280
Pregnant women (last trimester)	0	111	0	0	0	0	0	111
Lactating women	0	528	0	0	0	0	0	528
TB patients (as necessary)	0	0	0	0	0	0	0	0
Elderly (as necessary)								
Others, e.g. children 6-14 years of age		4						4
Total	128	867	5	10	1	56	72	923

During this period, 1049 patients received supplementary feeding through the eight centers located in the two districts. The default rate in Kitgum district was 11.3% while in Pader district it was 6.9%.

III. Program Constraints

- The unstable security situation delayed the establishment and regular monitoring of activities in both districts.
- The lack of available, qualified medical staff, who were willing to work in these two insecure districts, hampered implementation.
- Slow progress in custom clearance and registration of two ambulances imported from Kenya delayed activities.
- Mucwini SFC activities had to be temporarily suspended after stock for one month was handed out to non-qualifying and non-participating beneficiaries on December 20, on the orders of visiting politicians. Activities resumed after WFP replenished the stock.

Attachment: Summary of Nutrition Survey in Kitgum and Pader Districts of Northern Uganda

Summary of the Nutrition and Health Assessment in the Internally Displaced Persons Camps in Kitgum District, September - October 2003

Background

The human suffering caused by the atrocities of the Lord's Resistance Army (LRA) in northern Uganda has seen waves of increase and decrease since 1987. These atrocities intensified in June 2002 and since then, the suffering of the people has increased many-fold. At the time of the survey, there were 10 Internally Displaced Persons camps in Kitgum district alone, where an estimated 237,240 people reside in sub optimal living conditions. *(Since the time of the survey, additional camps have been established in Kitgum.)*

Displaced people have limited access to their land and to health and social services; the security situation also fluctuates around the camps. Kitgum and Pader have remained areas of limited access to most services and people have remained isolated in the camps. The last reported nutrition surveys undertaken in Kitgum were in 1999 when the global acute malnutrition averaged at less than 9% (ACF). In 2000, World Vision reported a 19.1% global acute malnutrition rate in its areas of operation. In 2002, some parts of Kitgum district were affected by drought and some parts by LRA attacks. WFP has been distributing food to the displaced populations in the camps and also to the drought affected populations in Chua County to the east of the district. With changing access to farming land, WFP has been modifying the food rations provided to the households to bridge the food and nutritional gap of the households. While WFP has been responsible to meet the food gap of the households, agencies like UNICEF and other NGOs have provided the non-food support to ensure minimum standards for basic social services, water, sanitation and health.

In order to assess the nutritional status of the population, a rapid assessment was undertaken in the Kitgum IDP camps collaboratively by IMC, UNICEF, District Directorate of Health Services (DDHS) and the World Food Program (WFP).

Methodology

Given the situation of insecurity in the camps, it was not possible to be in the camps for more than 4-5 hours per day. Therefore, a rapid assessment technique was used to collect data that could provide indications to the extent of malnutrition in the camps. This was also required to be able to plan programmes specifically for individual camps, given the different needs in the camps.

WFP provided the household information. On the basis of the population size, 20% of the population was considered to be children in the selected age group (6-59 months of age). On the basis of this total target population, a sample between 213 and 279 was drawn per camp. The variation was due to the fact that a correction formula was applied when the sample size was more than 10% of the target population. The methodology was drawn from the Nutrition Guidelines (MSF, 1999). Data from a total of 2,313 children was collected randomly. However, due to errors in some data sets (camps), data for only 1,584 children could be analyzed and are presented in this report. Data for IDP camps Agoro, Palabek K and Mucwini are not included in this analysis.

The following data was collected between September/October 2003 from the 7 camps and analyzed:

- Weight for height
- Access to food by households
- Infant feeding practices
- Child morbidity pattern
- Access to water and sanitation

RESULTS

Nutritional status

The results of the rapid assessment indicated a large variation between the camps in the levels of malnutrition (weight for height, < -2z scores and cases of edema). In Kitgum, it revealed that global acute malnutrition (GAM) ranged from 13.5% to 18.8% in the different camps. Four of the seven camps for which data are presented showed a malnutrition rate exceeding 15%. The results show a high rate of severe malnutrition (Weight for height < -3 z scores) in most camps.

Table 1: Nutritional status of children 6-59 months in IDP camps in Kitgum district September / October 2003

Name of Camp	Sample size	Severe acute malnutrition Weight for height<3Zscores	Global acute malnutrition Weight for height<2Zscores
Omiya Anyima	213	6.1%	18.8%
Palabek Gem	228	1.3%	14.0%
Lokung	221	5.9%	18.1%
Padibe	225	4.0%	15.1%
Potika A	230	3.5%	13.9%
Potika B	231	2.2%	13.9%
Kitgum Matidi	236	5.1%	17.8%

In Pader, the survey revealed that the global acute malnutrition ranged from 5.3% to 21% in the different camps. Pajule/Lapul and Acholibur had the highest rates of global acute malnutrition: 21% and 17% respectively. While the other five camps had a global acute malnutrition (weight for height < - 2 Z scores) of less than 15%, there were concerns about the results showing a high rate of severe acute malnutrition (weight for height < -3 Z scores) in most camps.

Table 2: Nutritional status of under fives in Pader district Sept/Oct 2003

Name of Camp	Sample size	Severe acute malnutrition Weight for height<3Zscores	Global acute malnutrition Weight for height<2Zscores
Pajule/Lapul	212	5.7%	21%
Adilang	192	2.6%	5.3%
Amoot/Arum	243	1.2%	5.4%
Pader (town)	244	4.5%	11.9%
Rachkoko	220	1.8%	12.8%
Acholibur	200	5.0%	17.0%
Puranga	218	3.3%	7.7%

In both districts, results of the retrospective mortality analysis indicate that the majority of the deaths are due to fever, measles (a measles outbreak had been reported in the area during July), and acute respiratory infections (ARIs). Many cases of bloody diarrhea were also reported. The report indicates a high level of worm infestation, limited access to safe water (both in quality and quantity), poor access to health services and poor childcare and feeding practices.