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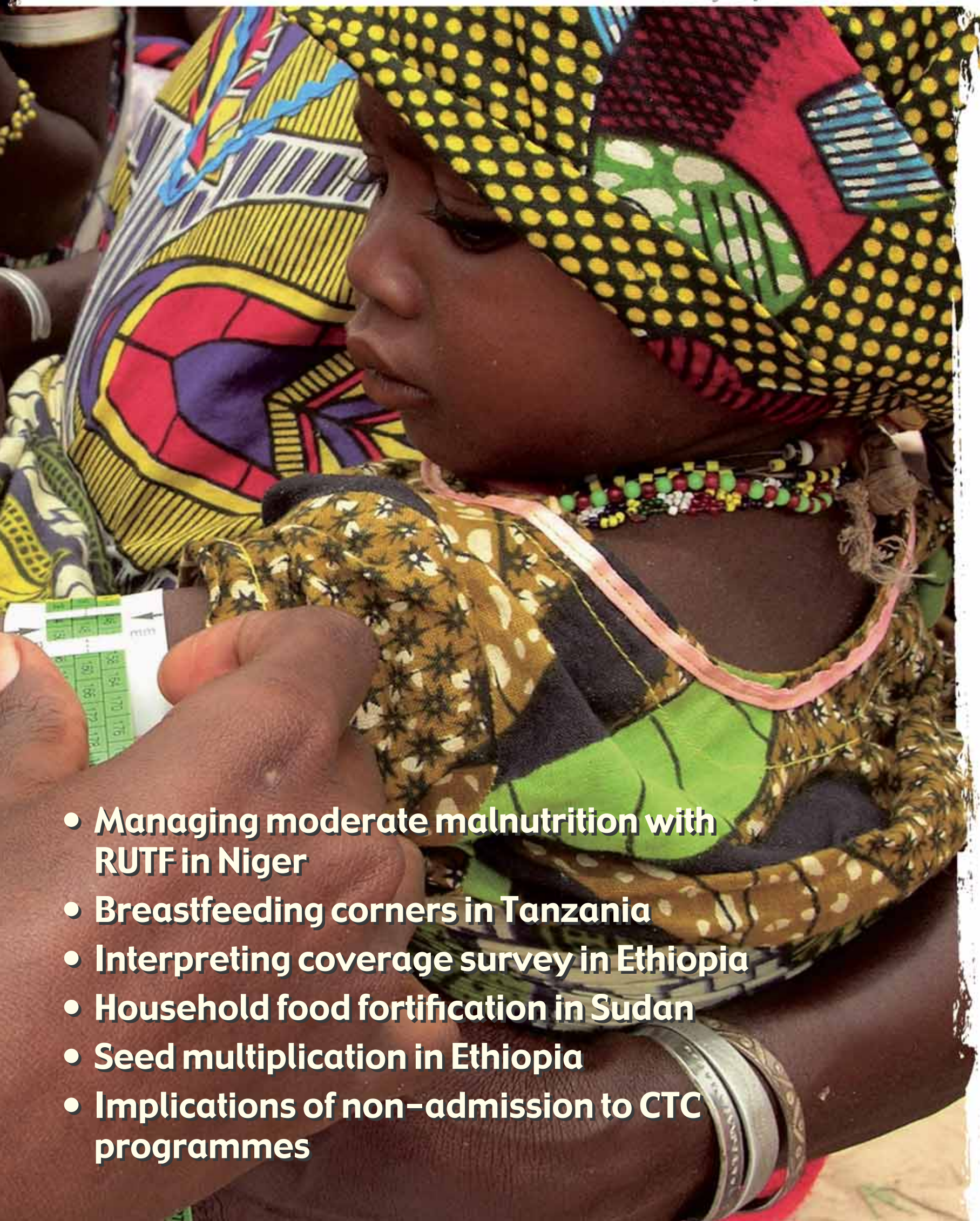
Field Exchange

Emergency Nutrition Network



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- Breastfeeding corners in Tanzania
- Interpreting coverage survey in Ethiopia
- Household food fortification in Sudan
- Seed multiplication in Ethiopia
- Implications of non-admission to CTC programmes

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From the Editor

One of the longest raging debates in nutrition continues in the letters section of this issue of Field Exchange. Put simply, does the nutrition community invest too much in magic bullets and not enough in home grown and more sustainable solutions? In the 1970s/80s, micronutrients supplementation became the 'magic bullet' to address malnutrition. Massive investments in Vitamin A, iron and iodine programmes were made while, according to critics, problems of chronic malnutrition and stunting were largely ignored. More recently, the roll out of community therapeutic care using ready to use therapeutic foods (RUTF) has drawn 'flak' from those who feel the approach is too dependent upon commercially produced, ready-made products and therefore not sustainable – see letters section in Field Exchange issue 19 (p23). The discourse on this subject is particularly apposite given the nature of so many field articles currently being submitted to the ENN, and in particular two of the articles published in this issue.

Our lead article describes MSF's experience of extending the use of new therapeutic products and operational strategies to the treatment of moderate acute malnutrition in Niger. During 2006, MSF operated 11 outpatient feeding centres attached to integrated health centres along with two inpatient referral feeding units, in two districts of Maradi region with an estimated population of 900,000 people.

Moderately malnourished children were admitted to these units and treated with the same medical and dietary protocols used for severe acutely malnourished patients (with the exception of no systematic antibiotic treatment at admission). Plumpy'nut® (1,000 kcal/day) was used as the RUTF offered to all outpatients.

A total of 64,733 children were admitted for acute malnutrition in 2006 and of these, 92.5% (59,880) were children with moderate malnutrition. Analysis of results for 59,698 moderate malnourished children showed a cure rate of 95.5%, death rate of 0.4%, and default rate of 3.4%. Average length of stay was 31.4 days and average daily weight gain was 5.28g/kg body weight/day.

As the authors of the article argue, these results are far superior to many emergency Supplementary Feeding Programmes (SFPs) implemented with blended flours. Indeed, the study just completed by SC UK and ENN of data sets from 82 programmes conducted by 16 agencies in 22 countries reflects a worrying situation with this 'standard' method of treating mild and moderate malnutrition in emergencies[1]. Only 41% of the programmes met all SPHERE standards with regard to impact at individual level and low levels of coverage meant that impact at population level was minimal and not significant. The main reason for poor performance appeared to be high default rates, although management and quality of foods also appeared to have a role. Failure of SFPs is problematic because, although severe malnutrition has a higher relative risk of mortality, the much larger numbers of those with moderate malnutrition means that the population-attributable risk of malnutrition to mortality is much higher in this group.

A second field article in this issue by Erin Tansey and Dr. Ibrahim Bani is also based upon the experience of using a 'ready made' (albeit low cost) commercial product to address a long-standing micronutrient problem in Darfur. The Christian Blind Mission International, Canada (CBMI) and the Micronutrient Initiative (MI), together with the Sudanese Red Crescent Society (SRCS) and the Sudan Ministry of Health National Nutrition Directorate (MOH-NDD), set out to implement a pilot project to test the acceptability to the internally displaced population of low cost micronutrient premixes and the feasibility of using it to improve micronutrient status in a camp in Darfur. Micronutrient deficiency is considered a major problem in Darfur. As well as contributing to infant mortality, over 50% of all children 6-59 months are estimated to suffer from anaemia, while vitamin A deficiency is estimated at 36%. Although food rations provide some micronutrients, they are reportedly not enough to meet the needs of the most vulnerable populations - pregnant and lactating women and children under 5 years of age.

Both these articles show how 'high or higher tech' solutions still appear attractive to many agencies. The exchange of views on this in the letter section in this issue of Field Exchange centre around the use of ready made therapeutic products and can be summarised as follows.

On the one hand it is argued that the use of ready-made products risks creating a large-scale dependency on expensive externally imported items. What happens when the emergency is over and funding dries up? There are also concerns about monopolies on production and therefore 'price fixing'. Protagonists of this view would prefer the use of locally made mixes with imported low cost vitamin and mineral mix (e.g. CMV therapeutic). They also argue that there are many experiences of ready-made F75 and F100 being used and supplies being erratic or drying up, so that health centre staff have to revert to home-grown solutions with inevitable adverse consequences for patients. There are also many experiences of home-based products being used at lower cost and working, so why change to a regime that is more expensive and may be precarious.

Arguments against this are largely nutritional, e.g. home-made products may have a higher than desirable osmolarity and can induce diarrhoea in a few children, quality control may be difficult to achieve using modular feeds, vegetable oils easily become rancid generating high peroxide levels that place at risk children who have very little in the way of anti-oxidants while locally sourced dried skimmed milk may not meet the low sodium and iron specification that commercial manufacturers source to make therapeutic milk. The bottom line for those who support the use of 'commercial' products is that "although we know we can 'get away' with using local ingredients we are falling short of the recovery we know we can achieve". Furthermore, it is argued, issues of sustainability are more a question of commitment and whether products are perceived as foods or medicines. If viewed as the latter, then there is less likely to be questions about sustainability in developing countries. Finally, there is no reason why therapeutic products, such as F75, Resomal and F100, could not be produced locally with quality control – similar to the way in which local RUTF manufacturing is currently being rolled out.

No doubt such arguments will continue and to some extent one cannot help feeling that the views of each camp are to some degree politically (with a 'small p') informed. However, as the ever pragmatic editor, one has to ask whether generalisations here are necessary or even desirable. Surely, each context needs to be examined and assessed individually. For each context, questions should be asked regarding whether ready made products can be locally manufactured, whether MoH policies and strategies exist or can be modified so that budgets are assured for commercial products, and whether existing home-grown modular feeding leads to adequate outcomes within existing health services and whether these can be improved upon. Then it simply becomes a judgement call.

As always, there are a whole array of other articles and research summaries in this issue of Field Exchange. A field article from the agency Self-Help Development International discusses the experience of establishing a seed development programme in Ethiopia, while Saul Guererro from VALID discusses a study showing the impact of previous non-admittance on Community Therapeutic Care (CTC) programmes in terms of subsequent rejection of the approach. Research summaries include a review of cash and voucher programming in a number of countries and experiences of more rapid nutrition survey implementation using the Lot Quality Assurance Sampling (LQAS) approach.

Enjoy and finally please don't forget to fill out your evaluation forms (included on your mailing insert and also online). Your feedback lets us know whether we are hitting the mark or whether you want change.

Jeremy Shoham

Any contributions, ideas or topics for future issues of Field Exchange? Contact the editorial team on email: office@ennonline.net

[1] A Retrospective Study of Emergency Supplementary Feeding Programmes. Dr Carlos Navarro-Colarado. June 2007. ENN and SC UK. Available at http://www.ennonline.net/research/

Screening at MSF ambulatory feeding centre (Crena) in Myria

Management of moderate acute malnutrition with RUTF in Niger

By Isabelle Defourny, Gwenola Seroux, Issaley Abdelkader, and Géza Harczi

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Between 2001 and 2005, the Médecins Sans Frontières (MSF) therapeutic feeding programme in Maradi, Niger offered treatment for severe acute malnutrition centred on the use of Ready to Use Therapeutic Food (RUTF) and the outpatient management of all uncomplicated cases. During the malnutrition crisis in 2005, the programme demonstrated its capacity to handle large numbers of patients while maintaining highly satisfactory results. Over 40,000 severely malnourished children were treated in Maradi region alone, with a cure rate above 90%[1].

The 2005 crisis in Niger has led to an increased understanding of the problem of malnutrition and how to extend treatment to large numbers of affected children. A national protocol favouring outpatient treatment with RUTF for severe acute malnutrition was adopted in July 2005. For the first time in 2006, the treatment of malnutrition was integrated into the national action plan against food insecurity. The government of Niger, United Nations (UN) agencies and international donors went forward with a plan to treat 500,000 acutely malnourished children during 2006. Nutritional surveillance was added to the early warning system, and Niger has reaffirmed its commitment to reduce child mortality rates as a public health priority. With assistance from the World Bank, the government has moved to implement free health care for children less than 5 years of age and for pregnant women.

The results obtained in 2005 with severe acute malnutrition suggested that the same strategy of outpatient management with RUTF would be of benefit for the treatment of acute malnutrition at earlier stages of presentation. Therefore in 2006, MSF decided to extend the use of these new therapeutic products and operational strategies to the treatment of moderate acute malnutrition.

The MSF Programme

In 2006, MSF operated 11 outpatient feeding centres attached to integrated health centres (Centres de Santé Intégrés), along with two inpatient referral feeding units, in two districts of Maradi region with an estimated population of 900,000 people[2].

Moderately malnourished children were admitted to these units and treated with the same medical and dietary protocols used for severe acutely malnourished patients (with the exception of no systematic antibiotic treatment at admission). Within the programme, the distinction between moderate and severe acute malnutrition was abandoned in favour of a distinction between complicated and non-complicated acute malnutrition. Children were admitted according to standard criteria for acute

[1] Defourny I, Drouhin E, Terzian M, Tatay M, Sekkenes J, Tectonidis M. Scaling up the treatment of acute childhood malnutrition in Niger. Field Exchange 2006; 28: 2-4.
[2] Système National d'Information Sanitaire, Gouvernement de Niger. 2005.

Figure 1 Weekly admissions of children, MSF therapeutic nutrition programme, Maradi region, Niger, 2006

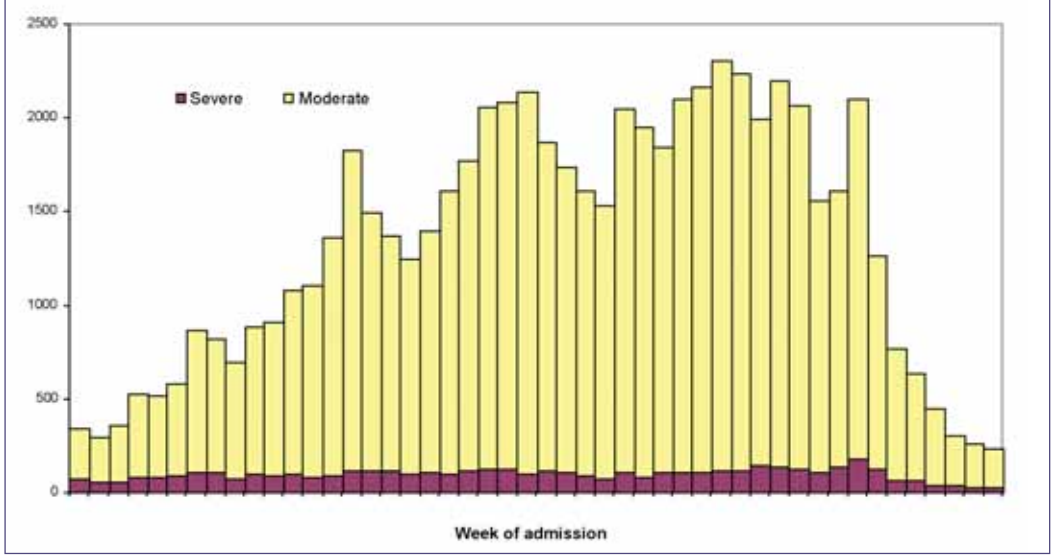

Table 1 Outcomes for acute moderate malnutrition cases

	Cure	Death	Default	Non-respondent	Transfer	Total
Non-complicated	49,517	50	1,729	60	5	51,361
	96.4%	0.1%	3.4%	0.1%	0.0%	
Complicated	7,514	182	278	335	28	8,337
	90.1%	2.2%	3.3%	4.0%	0.3%	
Total	57,031	232	2,007	395	33	59,698
	95.5%	0.4%	3.4%	0.7%	0.1%	

Table 2 Average length of stay for malnourished children in a therapeutic feeding unit in Maradi, Niger, 2006

Length of Stay (days)	Mean	CI 95%
Moderate	31.4	[31.3; 31.6]
Severe	42.6	[41.8; 43.4]
Total	32.1	[32.0; 32.3]

Table 3 Daily weight gain for malnourished children in a therapeutic feeding unit in Maradi, Niger, 2006

Weight Gain (g/kg/days)	Mean	CI 95%
Moderate	5.3	[5.25; 5.32]
Severe	8.0	[7.81; 8.23]
Total	5.4	[5.40; 5.47]

malnutrition: weight-for-height (W/H) ratio < 80% of the NCHS median, and/or mid-upper arm circumference (MUAC) < 110 mm and/or bilateral pitting oedema. Complicated acute malnutrition was defined as acute malnutrition accompanied by anorexia and/or severe pathology. Complicated cases were admitted to one of the two inpatient units for stabilisation. All non-complicated cases were admitted directly to weekly follow-up care in one of the 11 outpatient feeding units, and were referred to inpatient units only if they developed complications during the course of their treatment. As in 2005, Plumpy'nut® (1,000 kcal/day) was used as the RUTF offered to all outpatients. Although the protocol did not distinguish between severe and moderate malnutrition (using complicated and non-complicated acute malnutrition classifications instead), data were collected and are presented here in terms of moderate and severe, to facilitate analysis and for the sake of clarity.

An admitted child was considered cured after maintaining a W/H ratio > 80% (NCHS reference) on two consecutive visits. Upon discharge, patients were given an additional week of RUTF treatment as well as a 25-kg ration of fortified blended flour (Unimix) and 5 litres of cooking oil.

Results

Results were analysed by using individual-based data from MSF programme monitoring, by means of a database comprised of information from individual treatment cards. A total of 64,733 children were admitted for acute malnutrition in the MSF nutritional programme in 2006 (Figure 1). Of these, 92.5% (59,880) were children with moderate malnutrition, and 7.5% (4,853) were children with severe malnutrition. Of the children admitted, 93.1% were less than 36 months of age, a trend consistent with past years. Readmission rates were 8.9% for moderate and 4.2% for severe cases. Of the children, 89.6% of moderate and 58.2% of severe cases were admitted directly into outpatient care. A total of 10,651 children (8,389 moderate and 2,262 severe) spent at least part of their treatment in an inpatient centre.

Analysis of results for 59,698 moderate malnourished children showed a cure rate of 95.5%, death rate of 0.4%, and default rate of 3.4% (Table 1).
Average length of stay was 31.4 days (Table 2), and average daily weight gain was 5.28g/kg body weight/day (Table 3). Approximately 75% of children had a W/H ratio > 85% of the NCHS reference median on discharge.

For the 4,796 severe cases discharged, the cure rate was 81.3%, death rate 3.0%, and default rate 10.3%. Average length of stay was 42.6 days, and average daily weight gain 8 g/kg body weight/day.

Discussion

In the past few years, thanks to the introduction of RUTF and the deployment of outpatient strategies, significant progress has been made in the treatment of severe acute malnutrition. However, the standard treatment of moderate acute malnutrition with fortified blended flours has continued to show disappointing results[3]. This failure is problematic because, although severe malnutrition has a higher relative risk of mortality, the much larger numbers of moderate malnutrition means that the population-attributable risk of malnutrition to mortality is much higher in this group[4]. As stated in Yip and Scanlon more than 10 years ago, "there is no question the most severely malnourished children suffer the most, but they may not be contributing to most of the suffering"[5]. Furthermore, although the treatment of severe malnutrition is improving, it is still more difficult to treat than moderate malnutrition. Treating malnutrition earlier is more effective, less risky to the patient and less costly.

The results obtained by MSF in Maradi confirm the efficacy of RUTF in the treatment of moderate acute malnutrition. Weight gains recorded were considerably higher than those obtained in classic supplementary feeding programmes (SFPs) using fortified blended flours. Default rates were also atypically low compared with standard SFPs. Combined with the large numbers of affected children recruited, this outcome suggests that parents are convinced of the superior effectiveness of RUTF in the treatment of acute malnutrition. Once again, as in previous years in MSF feeding programmes in Niger, tens of thousands of mothers were given the role of the prime therapeutic caregiver for their malnourished children.

Moreover, despite the continuous expansion, and therefore better coverage, of services for the severe acutely malnourished in Maradi since 2002, for the first time since the programme was opened in 2001, no detectable peak in numbers admitted during the hunger gap period was observed (Figure 1). Admissions of severe cases remained stable and at unusually low levels throughout the year. This finding strongly suggests that the management of the large numbers of moderate acutely malnourished with RUTF successfully prevented the development of severe acute malnutrition in the covered population.

In the countrywide nutritional survey conducted in November 2006 by the government of Niger, UNICEF and the World Food Programme, the prevalence of global acute malnutrition (GAM) in Maradi stood at 6.8%, with 0.6% severe acute malnutrition (SAM), compared with the national averages of 10.3% and 1.4%, respectively. For the first time, the Maradi region, which previously had amongst the highest rates of severe and global acute

[3] Navarro-Colorado C. A retrospective study of emergency supplementary feeding programmes. ENN/SC UK, 2007.
[4] Pelletier DL. The relationship between child anthropometry and mortality in developing countries: implications for policy, programs and future research. J Nutr 1994; 124: 2047S-2081S.
[5] Yip R, Scanlon K. The burden of malnutrition: a population perspective. J Nutr 1994; 124: 2043S-2046S.

malnutrition in the country, had become at the end of 2006, the region with the lowest rates of acute malnutrition. The results of the nutritional survey, and the lack of increase in severe malnutrition during the hunger gap, provide strong evidence for a major impact on the nutritional status of young children in Maradi subsequent to the widespread use of RUTF.

The nutritional crisis in Niger in 2005 was notable for the unprecedented numbers of young children treated for severe acute malnutrition. The nutritional situation in 2006 was not of the same magnitude, but it is clear that the numbers of children affected by acute malnutrition even in a 'good' year is extremely high. For example, 26,000 children less than 3 years old from the Guidam Roumdji district of Maradi were admitted for acute malnutrition in the MSF programme in 2006. This number represented well over half the estimated 43,500 children of that age believed to be living in this one district of Maradi.

Despite the success of the MSF programme in 2006, the individual therapeutic treatment of tens of thousands of children requires significant resources and would clearly be a daunting task for an already overstretched, understaffed and underfunded health care system in one of the poorest countries of the world. With such large numbers of young children affected by acute malnutrition in rural areas of Niger each year, it would make sense to go one step further and consider effective preventive alternatives. In May 2007, MSF began implementing a new programme targeting all children younger than 36 months with a new ready-to-use nutritional supplement designed to prevent malnutrition. This supplement is being delivered through monthly distributions rather than through therapeutic feeding units. The hope is that this strategy will significantly reduce the incidence of acute malnutrition amongst the young children of the rural poor in Maradi.

Conclusion

Results obtained by MSF in Maradi in 2006 prove that RUTF is an effective treatment for moderate acute malnutrition. The large numbers treated and the low numbers of defaulters are indicative of the strong participation and adherence of the mothers and families of these children. The treatment of acute malnutrition at an earlier stage reduced admissions for severe acute malnutrition and eliminated the usual rise in severe cases during the hunger gap period.

Considering the well-documented association of acute malnutrition with child mortality, it is highly likely that the effective treatment of acute malnutrition, or its effective prevention, using newly developed nutrient-dense RUTF, will have a major impact on mortality of young children amongst the poorest populations of the world.

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Valerie Babize/MSF, Tchad, 2007

MUAC measurement of a child in a camp for displaced Chadians, Koukou, Tchad

© Cecile Dehopre/MSF, Niger, 2007

Mother and child in Dakoro, Niger, where MSF focused on the problem of acute seasonal malnutrition

Field testing LQAS to assess acute malnutrition prevalence

Summary of published research[1]

In emergency settings, the prevalence of global acute malnutrition (GAM) needs to be assessed quickly, accurately and often repeatedly, to determine when and where to start and stop humanitarian aid. The most common approach for assessing GAM is a two-stage 30 x 30 cluster survey – which can be time-consuming and expensive. Alternative, less time-consuming and resource-intensive approaches are needed. One of the most frequently used quality control statistical methods in international health is Lots Quality Assurance Sampling (LQAS). Cumulative binomial probabilities are used in LQAS analyses to detect if a critical threshold has been reached for an indicator. To design an LQA sampling plan, the threshold of interest for an indicator, e.g. GAM prevalence, and tolerable statistical error are defined a priori.

A recently published article examines three adaptations of LQAS to assess GAM and other child-level indicators in food-insecure settings.

Computer simulations confirmed that small clusters instead of a simple random sample could be used for LQAS assessments of GAM. Three LQAS designs were developed (33 x 6, 67 x 3, sequential design)[2,3], to assess GAM thresholds of 10, 15 and 20%. The designs were field-tested simultaneously with a 30 x 30 cluster-survey in Siraro, Ethiopia during June 2003. Using a nested study design, anthropometric, morbidity and vaccination data were collected on all children 6-59 months in sampled households. Hypothesis tests about GAM thresholds were conducted for each LQAS design. Point estimates were obtained for the 30 x 30 cluster-survey and the 33 x 6 and 67 x 3 LQAS designs. In order to collect data for the study, 15 interviewers were hired and trained. Teams used an odometer to record the distance travelled from the base camp to the first cluster for each work-day and used a stopwatch to record the time required to complete each survey.

Hypothesis tests showed GAM as < 10% for the 33 x 6 design and GAM as > or = 10% for the 67 x 3 and sequential designs. Point estimates for the 33 x 6 and 67 x 3 designs were similar to those of the 30 x 30 cluster-survey for GAM (6.7%, Confidence Interval (CI) = 3.2-10.2%; 8.2%, CI= 4.3-12.1%, 7.4%, CI – 4.8-9.9%, respectively) and all other indicators. The CIs for the LQAS designs were only slightly wider than the CIs for the 30 x 30 cluster-survey, yet the LQAS designs required substantially less time to administer.

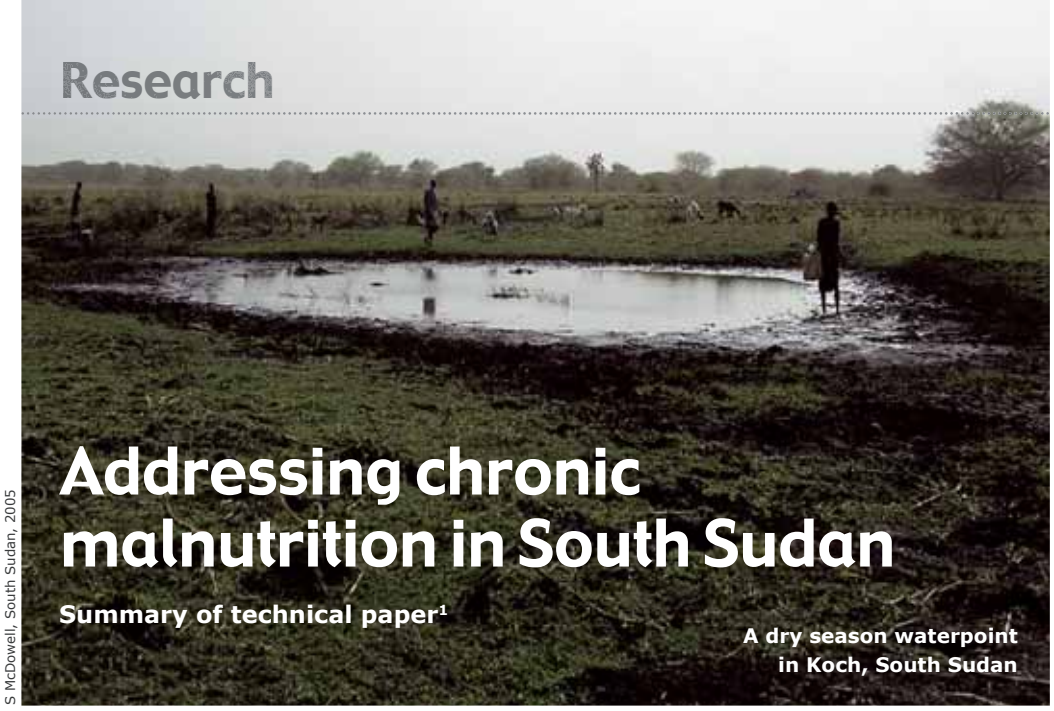
The study concluded that the LQAS designs provide statistically appropriate alternatives to the more time-consuming 30 x 30 cluster-survey. However, additional field-testing is needed using independent samples rather than a nested study design, which was the most critical limitation of the study. Ideally, data for each design should be sampled independently to allow for stricter comparison of results between designs.

Despite this limitation, the authors concluded that LQAS designs can contribute to the methodological toolkit of humanitarian agencies.

[1] Deitchler M et al (2007). A field test of three LQAS designs to assess the prevalence of acute malnutrition. Int J. Epidemiology. Advance access published May 21st, 2007, pp 1-7. The article is available free from http://ije.oxfordjournals.org/cgi/content/abstract/dym092v1

[2] Thirty-three clusters with six children in each, sixty seven clusters with three children in each, etc.

[3] A Retrospective Study of Emergency Supplementary Feeding Programmes. Dr Carlos Navarro-Colarado. June 2007. ENN and SC UK. Available at http://www.ennonline.net/research/



S McDowell, South Sudan, 2005

Addressing chronic malnutrition in South Sudan

Summary of technical paper[1]

A dry season waterpoint in Koch, South Sudan

CARE South Sudan have recently conducted an analysis of nine years of nutrition data provided by anthropometric surveys undertaken in the northern Bahr el Ghazal and Upper Nile regions in southern Sudan. Available surveys covered both the war (1998-2002) and the immediate post-conflict period (2003-2006). They are also one of the very few sources of quantifiable data collected using consistent, comparable methodologies in South Sudan during the war.

Data analysis from 218 two-stage cluster surveys indicated annual severe acute malnutrition rates (wasting) averaging above 20%. Malnutrition appears to increase through the dry season and subsides with the coming of rains. Seasonally, rates can increase by 50% in the dry season but have rarely dropped below the WHO emergency threshold of 15% in the wet season. The seasonal peak does not appear to be associated with the traditional hunger period nor does it appear to be closely associated with mortality. These chronic trends persist despite the cessation of hostilities ending 20 years of civil war and concurrent improvements in food security.

Explanations for these chronic and alarming rates of malnutrition are more likely to be found in health environments, as well as behaviours or caring practices to which under five children are exposed. South Sudan has seen an improvement in food security conditions due to increased food availability and access. The explanation of why that improvement has not translated into improvements in under-five nutrition may simply be explained by static health and caring environments since the war. Malnutrition must be understood in its multifaceted nature if appropriate strategies to roll back chronic high rates of malnutrition in South Sudan are to be identified.

Acute malnutrition rates from this study imply prevalence of malnutrition affecting approximately 250,000 children across South Sudan. Such widespread, significant and seasonally fluctuating levels of malnutrition appear to exist with regionally comparable levels of mortality. The scope of malnutrition is vastly beyond the capacity of traditional nutrition interventions such as selective feeding. Solutions must be strategic and simultaneously address both acute needs and underlying causes.

Improving security/access, food security conditions and a clearer understanding of the nature of current malnutrition offers an opportunity to reduce rates that was not afforded during the war.

CARE South Sudan makes a number of recommendations for both immediate and medium term action.

Immediate recommendations include:

- Nutrition interventions that actively find and support children-at-risk in the December to February period.
- Integrating therapeutic feeding/supplementary feeding response capacity into Northern Bahr El Ghazal/UN health system.
- Identifying options to improve water quantity and quality and household water storage and access during the dry season.
- Small, well timed targeted food aid to vulnerable households.

Medium term actions include;

- Women's education to improve the quality of her role as a caregiver.
- Support growth of agrarian, livestock-based rural economy through supportive trade policy and taxation schemes.
- Develop infrastructure that promotes trade and the continued emergency of a rural economy.
- Promote policies or interventions that reduce transport costs, storage constraints improve information flow and communication options.

For more information, contact Steve McDowell, email: mcdowell.stephen@gmail.com

[1] CARE South Sudan, Nairobi, Kenya. April 2007. The technical paper was prepared by Steve McDowell of CARE South Sudan. Requests for the full paper can be directed to mcdowell.stephen@gmail.com

Onesmus Muinde, South Sudan, 2006

Children collecting water in Menime, South Sudan

Caring for premature babies in a conflict zone

Summary of published experiences[1]

This paper describes aspects of the authors work as a midwife with Médecins Sans Frontieres (MSF) in a north-western regional hospital in Côte d'Ivoire during the civil war (2004-2005).

In Cote d'Ivoire, skilled birth attendants assisted with 62.5% of births (2000). The Infant Mortality Rate was 118/1000 of live births and the child mortality rate for children under 5 years was 162/1000 for girls and 225/100 for boys. In this resource poor context, breastfeeding is a matter of life or death.

MSF provided primary health care at a rural hospital in Danané and from daily mobile clinics. Most of the population lived in small villages scattered throughout the bush. Almost half of the pregnant women seen in the clinics tested positive for malaria and many others suffered concurrent opportunistic infections including STDs (sexually transmitted diseases) and were often chronically anaemic. Many first time mothers were in their early teens. Of the 160 or more births per month at the hospital, at least six or more per month who survived their birth were significantly premature – weighing less than 1500 grams, with a number around 1000 grams or less that were mostly girls.

In four case studies, the author describes aspects of the care including initiating a feeding regimen for premature babies, the use of kangaroo care to aid thermoregulation, initial stabilisation of premature infants including feeding methods maintaining oxygenation, and feeding multiple infants.

Most premature babies who survived the birth were around 29-33 weeks gestation. After birth, most babies had an intravenous line inserted for antibiotics and for parenteral hydration when they were not tolerating oral nutrition. Following initial stabilisation, the aim of management was to avoid/treat initial hypoglycaemia, maintain hydration, minimize weight loss and ensure weight gain. Thermoregulation was greatly improved by the introduction of Kangaroo care – skin to skin contact can raise a baby's temperature by 1 degrees C in 1 hour. Both staff and mothers needed reassurance that this technique would do no harm. Also, newborns tended to be wrapped loosely rather than swaddled which may suit a robust full term infant in a tropical climate, but not a premature baby.

Feeding premature infants

If they survived the first 4-5 days, most premature babies were able to breastfeed early (contrary to the author's midwifery teaching). Many were partially breastfed at 1100-1200g, and by 1400-1500g were fully breastfed. A number of techniques were used to support the mother in establishing breastfeeding, including nasogastric feeding of expressed breastmilk when initiating feeding, and breast compression during a breastfeed (where a mother squeezed and held her breast, pushing a bolus of milk that dripped into the baby's mouth). Expressing breastmilk was not a normal activ-

An infant receives colostrum (the first breastmilk produced on birth) via a nasogastric tube

H Harris/MSF, Cote D'Ivoire, 2006

ity for women but with support this was mastered. Expressed breastmilk was also given by cup or finger feeding (the latter where a mother inserted her clean little finger in the baby's mouth, touching the palate to stimulate the sucking reflex. Staff then gave breastmilk slowly via a syringe inserted alongside the finger – see picture below).

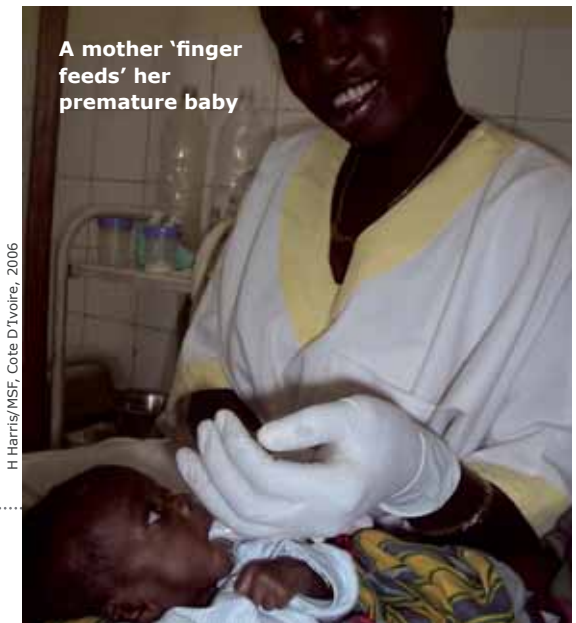
Where there was insufficient expressed breastmilk (there were no facilities for storage or milk banks), then 10% dextrose was given orally. Infant formula was rarely used as it was unsafe and unsustainable in this context and would remove the impetus to establish breastfeeding. Staff also felt it would have given the wrong message if formula was supplied by an international NGO, suggesting that it was acceptable and even preferable to mother's milk. The cost of a can of infant formula in the town pharmacy was more than a day's wages and there were inadequate facilities to support its safe preparation.

The average hospital stay for premature babies was approximately three weeks and most went home weighing around 1700 – 1800 grams. Many of the mothers of these premature babies had small children back in their village and had to balance the needs of other family members with the new baby.

In this setting, the author describes how "infant formula is a death sentence" and if efforts to increase supply were not successful, a message would be sent to the family to find someone else to donate breastmilk or arrange a wet-nurse. Sometimes this was easy, at other times, very difficult. A number of grandmothers were breastfeeding their orphaned grandchild. In one instance, a woman arrived who had four infants under her care all under six months of age (she had taken in her sister's 3 month old triplets, when her sister died). In this instance, the clinic fully supplied infant formula, the infants were monitored monthly at the clinic and did well.

The author concludes with a heart-felt tribute to the dedication of the national staff in supporting these infants, particularly in a setting where there is virtually no technology and survival depends on close monitoring, commitment, innovative thinking and lots of dedicated care.

[1] Harris, H (2007). A little help from my friends: caring for premature babies in a war zone. International Breastfeeding Journal 2007, 2:3 doi:10.1186/1746-4358-2-3. The full version of this article can be found online at: http://www.internationalbreastfeedingjournal.com/content/2/1/3



A mother 'finger feeds' her premature baby

H Harris/MSF, Cote D'Ivoire, 2006

Remittances during crises

Summary of published paper[1]

In disasters, remittances can play an important part in how people survive and recover. A recent Humanitarian Practice Group (HPG) briefing paper reports on a study into the role that remittances play in crises. The study was based on a review of relevant literature, as well as detailed case studies in Haiti, Pakistan, Somaliland, Sudan, Indonesia and Sri Lanka.

Globally, remittances have grown significantly in the last decade. In 2006, remittances through formal channels – banks and other financial institutions – were put at $268 billion; informal mechanisms, such as traditional money-transfer systems and hand-carried remittances – account for, perhaps, half as much again.

Humanitarian agencies and other actors concerned with the welfare of migrants have tended to neglect the importance of migration in livelihoods, or to see migration purely in negative terms, as a symptom of distress.

Remittances are often of importance following disasters, as they represent a relatively stable form of income, usually increase in times of crisis and directly contribute to household income. For example, in the months following the tsunami, the Sri Lankan Central Bank recorded a substantial increase in remittances. Remittance flows can be vulnerable to disruption during disasters. Transport and communications may fail, people may be displaced and, in the case of conflict, borders may be closed or communications shut down. Border closures and restrictions on movement due to the conflict in Darfur have had devastating consequences for people reliant on hand-carried remittances from family members working in Libya, Chad and Saudi Arabia. Physical damage to people's homes and property may include the loss or destruction of documentation needed to access remittances.

The study findings have important implications for humanitarian action in disaster risk reduction, relief and recovery. Helping in the restoration of remittance flows may be a quick and effective way of supporting livelihoods recovery and also impact the rest of the community.

In responding to crises and disasters, aid agencies should continue to develop assessment approaches that more explicitly take account of the important role migration and remittances play in people's livelihoods. However, as people are understandably reticent to talk about remittance receipts openly, for fear that they will receive less aid, it may be necessary to draw upon pre-disaster secondary data about migration and remittances and use qualitative approaches to understand the impact of a crisis on remittances.

Humanitarian agencies also need to design their assistance programmes in ways that complement and enhance remittance flows. For example, agencies have used existing remittance systems, such as 'hawala[2],' in their aid programming and cash assistance may open up access to financial institutions for recipients.

Agencies also need to account for migration in programme design, e.g. cash or food for work can restrict mobility.

In addition, remittances may be supported by polices that help cut the cost and bureaucratic difficulty of sending them, measures to improve the legal status and level of integration of immigrants within host societies, and steps to promote access to employment and education. Replacing lost documents is usually a government responsibility, but where a government is unable or unwilling to do this, aid agencies might be able to provide identity cards linked to beneficiary registration.

All disaster-affected populations should have rapid access to national and international telecommunications. This might mean setting up internet cafes in displacement or refugee camps, distributing mobile phones and working with private sector companies to establish or re-establish mobile networks or supporting small scale enterprises providing internet or mobile phone access.

Remittance senders should also be considered by aid actors and governments responding to emergencies. The need to return home to help loved ones may mean that jobs abroad are lost or migrant status is rescinded, forcing migrants further into debt. Governments could consider special, free visa measures to enable people to return home during emergencies without jeopardising their migrant status. Assistance could be given to cover the costs of transport. Employers of migrant workers could be encouraged to grant compassionate leave to allow people to go home, and remittance transfer companies could be encouraged to waive or reduce fees for sending money to disaster-affected countries.

1 Savage. K and Harvey. P (2007). Remittances during crises: implications for humanitarian response. HPG Briefing Paper 26. May 2007

2 Hawala (also referred to as hundi) is an alternative or parallel remittance system that originated in South Asia but is now used extensively worldwide. The components of hawala that distinguish it from other remittance systems are trust and the extensive use of connections such as family relationships or regional affiliations.

USAID funded vegetable oil being distributed at Kassab IDP camp, North Dafur

Pablo Recalde/WFP, South Sudan, 2007

Global factors shaping food aid

Summary of published paper[1]

A paper in a recent special issue of Disasters on food aid, reviews global trends affecting the future of food aid and food aid programming and possible implications for WFP. Three major factors are deemed to shape the foreseeable future of food aid;

- **i)** the mechanisms for the global governance of food aid are under review and may undergo major changes in the coming years – most notably the renegotiations of the Food Aid Convention (FAC)
- **ii)** donor agency trends
- **iii)** the extent to which best practices in food aid programming are implemented.

i) Mechanisms for global governance of food aid

According to the authors, the global mechanisms and institutions that govern the allocation, utilisation and reporting of food aid resources are in disarray, outdated and dysfunctional. The World Trade Organisation (WTO) negotiations on a new Agreement on Agriculture broke down in July 2006 and it seems unlikely that serious negotiations on an agreement, and therefore new food aid disciplines, will be restarted any time soon. Major unresolved issues include the form of loans or pure grants and the tying status of food aid. While the European Commission (EC) and Canada have untied their food aid in recent years, the United States (US) remains tied to its own domestic market, which some say is an export subsidy in disguise. However, the view of the US (and some others) is that any attempt to untie contributions would result in the loss of political support from powerful US agribusiness and shipping interests, and hence a substantial reduction in US contributions.

There has been widening agreement that local and regional purchase should be the first option, but disagreement about who may declare an emergency, whether food aid must be wholly in grant form and over the controversial practice of monetisation. Given the stalling of the trade talks, the major arenas for the reform of food aid are likely to be the renegotiation of the FAC and the upcoming US Farm Bill.

The FAC, originally drafted in 1967, was last renewed in 1999 and extended in 2002. It may be renegotiated in the coming years. It has shortcomings. The FAC contains a legal agreement on the minimum tonnage obligations of donors, but, because it has no mechanism for effectively monitoring or enforcing compliance by signatories, these obligations are now routinely ignored. There is currently an effort by non-governmetnal organisations (NGOs) to broaden the membership of the FAC, strengthen its needs-based focus and ensure that minimum commitments are reported in a transparent, timely and consistent manner. How this will play out remains to be seen. With regard to food aid, further efforts to improve its role need to include: allocation on the basis of need, vulnerability and impartiality, operations backed by appropriate analysis, appropriate utilisation and management of resources, and clarity of obligations and accountability of stakeholders.

ii) Donor trends in food aid

At least three key donor trends in food aid can be identified that will shape the nature of future food aid programming. These include declining resource levels and the strong priority given to emergency programming,; a growing preference for local and regional purchasing,; and the need for greater complementarity with cash programming.

Overall, levels of food aid have been declining steadily – from an average of 12-15 million tonnes in the late 1980s and early 1990s, to 8.2 million tonnes in 2005. There has been a much greater focus on emergencies and a marked decline in government-government or programme food aid. This has inevitably led to declining resources for development and a greater concentration of those resources in fewer countries. Competition for food aid resources is likely to increase, particularly in the light of increasing demand for bio-fuels and other demands on world grain supplies. In 2005, despite a slight increase in overall resource availability, there was a substantial shortfall in resources for emergency food assistance. In 2006, there were cuts early in the year in Sudan. Programmatically, between relief and development there is an emergent grey area around social protection and safety nets for the chronically food insecure and around the reduction and mitigation of disaster risk. The safety net category is relatively predictable, permitting donors to allocate resources without waiting for assessment appeals.

Currently, significant cash resources are allocated to local or regional purchase. In 2005, just under half of all food aid was of US origin and virtually all of that was sourced from US markets. About half of the remainder of food aid was purchased in local or regional markets. If well managed, local or regional purchase has a number of advantages. Shorter shipping distances can lead to quicker responses in emergencies, it can be more cost-efficient, and hence partially help to address the resource shortfall issue and it can also be less market-distorting and support market development objectives in developing countries. The authors of the paper argue that it is imperative that operational agencies become more adept at managing local purchasing.

The US administration is proposing (against significant political opposition in Congress) to increase the amount of locally and regionally procured food in the US food aid portfolio – and this is likely to be suggested as part of the US Farm Bill, the authorising legislation behind the US food aid portfolio which is currently being negotiated. For obvious reasons, the practice falls foul of the interest of both the agribusiness companies that procure and supply US food aid, and the shipping industry that is legally mandated to deliver the majority of it. Given the dominance of the US among food aid donors, the outcome of this process may be the single biggest factor affecting the future of food aid.

Amongst some European and private donors there is a recent trend towards more cash-oriented interventions rather than in-kind aid. The tTsunami response, in particular, provided a lot of experience of working with direct cash transfers, partly as there was an unprecedented level of unrestricted cash donations to humanitarian agencies. Deciding what is the appropriate mix of cash and in-kind will be a significant challenge.

iii) Best practice

The extent to which WFP and it's implementing partner agencies are able to incorporate best practice into operations constitutes the third major factor determining the future of food aid. Key areas are information systems, emergency analytical imperatives, innovations in programme design and implementation, focusing particularly on improved targeting and improvements in supply chain management.

WFP has been a critical actor in improving information systems, particularly in the area of vulnerability assessment and more recently with the SENAC (Strengthening Emergency

Local purchase of food commodities by WFP in Zambia

WFP Photolibrary, Zambia, 2004

Needs Assessment Capacity) initiative. Among practices that still require attention is the guarantee of a separation of information generation and analysis from operations and operational budgets. The Integrated Phase Classification System, developed in Somalia but in widespread use in the drought crisis affecting pastoral area s of the Greater Horn in 2006, is a significant attempt to draw multiple sources of information into a single analysis of food security and humanitarian need. Other important recent work includes the understanding of so-called poverty traps – asset thresholds below which people cannot 'pull themselves up by their bootstraps', but which can be overcome if people acquire a basic portfolio of assets.

Developing tools to estimate the appropriate mix of resources, e.g. cash versus food, is another major challenge. Targeting is a further difficult area where, it is argued, the limited amount of research is not encouraging. There is ample evidence of both exclusion and inclusion error. Furthermore, although early warning and supply chain management innovations have helped to reduce delays and ensure supplies in that interim, as long as food has to be shipped long distances, the timing of deliveries as well as amounts provided and duration of programmes all result in significant inclusion and exclusion targeting errors. A review of the literature on targeting generally shows that there are no universal recommendations with regard to targeting.

Many innovations in supply-chain management have improved the timeliness and management of food aid. Pre-positioning food aid, either in strategic reserve or in local warehouses, now routinely provides resources to cover a gap between when needs are identified and when the requested resources arrive.

The paper concludes by applying these considerations to Sudan, which (according to the authors) is likely to continue to need food assistance for the foreseeable future. It is suggested that advocacy for appropriate types and amounts of resources will probably be an increasing part of 'doing business' in Sudan or in any complex emergency. WFP has been at the forefront of advocating for food resources for emergencies – a role that will, no doubt, continue. It is a major challenge to advocate for the appropriate resources for the context, whether emergency, chronic low-grade crisis or long-term poverty. Increasingly, this will mean not only food resources but also cash for either direct transfer or to fund inputs or activities that are complementary to food. Advocating for more appropriate governance mechanisms is a joint task for WFP and other operational agencies.

Finally, WFP Sudan already has a track record of local purchase for both domestic consumption and emergency operations in neighbouring countries. Building on the lessons learned from this experience to engage more broadly in local purchase is both an important challenge and an opportunity for WFP Sudan.

[1] Maxwell. D (2007). Global factors shaping the future of food aid: the implications for WFP. Disasters, 2007, 31 (s1): s25-s39

Cash-based responses in emergencies

Summary of published research[1]

A recent study explores the suitability of cash and vouchers in the full range of emergency contexts and finds that such responses are possible, even where states have collapsed, conflict is ongoing and there is no banking system.

The authors of the study describe how recent years have seen a rapid growth in the use of cash-based responses in emergencies, e.g. following the tsunami, in southern Africa as alternatives to food aid, as safety nets in Ethiopia and northern Kenya and in conflict-affected Somalia and Afghanistan.

It is argued that typical questions around cash, presented in terms of its supposed advantages and disadvantages against commodity approaches, are unhelpful. Instead it is best to present issues as open questions, which need to be thought through on a context specific basis.

Key issues in comparing cash and in-kind assistance are as follows;

- Cost effectiveness
- Security risk
- Corruption and diversion risks
- Anti-social use (e.g. buying alcohol)
- Gender considerations (disadvantages to women)
- Choice, flexibility and dignity (can people buy what they want)
- Market impacts (positive or negative)
- Consumption/nutrition (food aid can be fortified but cash may promote food diversity)
- Targeting (will targeting be impaired)
- Skills and capacity (to implement the programme).

A central question around cash transfers is how effectively markets will be able to respond to an injection of cash. Put simply, will people be able to buy what they want at reasonable prices. The key questions to ask about markets are;

- What are people likely to buy?
- How have markets for key goods been affected by the crisis?
- Can people buy what they need in local markets?
- How competitive is the market?
- What is likely to happen to the prices over the course of the project?
- Will the cash transfer cause price increases?

Assessing whether cash can be delivered safely by agencies and spent safely by recipients is one of the keys to determining feasibility. Evidence suggests that ways can be found to deliver and distribute cash safely even in conflict environments, in some situations, cash has been less prone to diversion than in-kind alternatives. The use of banks and other financial institutions potentially reduces the security and corruption risks associated with cash transfer. Where banks do not exist, aid agencies have been able to use a variety of innovative delivery mechanisms, including mobile banking services, sub-contracted security companies and remittance and money transfer companies.

Evidence from monitoring and evaluations overwhelming suggests that people spend cash on the basic items they need to survive and protect their livelihoods and that there is very little evidence of cash being used on what may be labelled 'anti-social' or inappropriate ways. Where cash grants have been provided for particular types of recovery after disasters, such as shelter or business recovery, evidence shows that cash is spent for these intended purposes. Furthermore, there is little evidence that cash is more likely than in-kind assistance to be controlled by men and therefore less likely to be spent on food.

The authors of the study ask why, given the advantages of cash, have agencies remained so resistant to using cash and conclude that the structure of the humanitarian system seems to inhibit it's use. This may partly be as the dominant UN agency (WFP) provides food aid that may, in turn, relate to issues around the tying of food aid to food surpluses in donor countries. There are, however, recent signs of movement. WFP is piloting cash-based responses, and has started to debate whether it could provide cash as an alternative to food aid when appropriate. There is also an issue around the lack of skills and expertise to implement cash programmes, although numbers are expanding as people learn on the job. Manuals and guidelines are also starting to be developed.

The study concludes that cash-based programming will continue to grow, probably at the expense of in-kind mechanisms in some contexts. Furthermore, humanitarian actors need to develop the skills to assess whether cash-based responses are appropriate, and to implement them when they are. Donors will also need to develop the skills and capacity to make informed decisions about whether to fund cash responses. The central role played by national governments in providing cash aid in Pakistan and following the Indian Ocean tsunami suggests that, where governments have the capacity, they are the most appropriate delivery channels. This may imply a reduced role for international aid agencies in some contexts. The growing interest and investment in cash transfers as part of longer-term safety nets within social protection strategies may also lead to a reduced need for the regular provision of large volumes of food aid, particularly in parts of Africa.

An overarching conclusion of the report is that giving people cash to enable them to buy what they needs is a simple concept, and should be a staple part of humanitarian response.

[1] Harvey. P (2007). Cash-based responses in emergencies. Humanitarian Policy Group Briefing Paper 25. January 2007. Access online at http://www.odi.org.uk/hpg/papers/hpgbrief25.pdf

Review of survey methodology in emergencies

Summary of published research[1]

A Seal, Bangladesh, 2003

Spinning the stick to select clusters during a UNHCR survey in Bangladesh

A recent paper set out to identify common methodological errors in nutrition and mortality surveys conducted in humanitarian emergencies, to examine trends over time and to provide recommendations on how to improve surveys in future.

The sample of surveys was selected from 948 reports of nutrition surveys received by the Nutrition Information in Crisis Situations (NICS) between October 1993 and April 2004 from 34 countries. Of these, 17 countries were selected using a random number generator and all of the survey reports in these countries were reviewed for analysis. Survey reports were evaluated for validity of sampling methodology, precision of estimates, quality of measurements and calculation of prevalence of acute malnutrition and mortality rates.

Three hundred and sixty eight survey reports conducted by 33 non-governmental organisations (NGOs) and international agencies in 17 countries were eventually evaluated.

Criteria for sampling validity were met for 85.9% of surveys. All of the random sample surveys that used sample sizes of 450 children for random and systematic sampling and 900 children for cluster sampling were sufficiently precise. However, cluster surveys that sampled <900 children were insufficiently precise - half of these were conducted in Sudan with many of them occurring in 1999. The vast majority of surveys correctly included children 6-59 months or 65-110 cm. Measurements met the quality criterion in 57.1% of surveys, the remainder that did not meet criterion due mainly to missing information. Regarding oedema, 8.4% of surveys did not include oedema in the definition of acute malnutrition. Three-quarters (76.1%) of the surveys provided the percentage of oedematous children. Incorrect interpretation of results occurred in 15.5% of surveys. Overall, 42.4% of surveys met the criteria for correctly calculating prevalence of acute malnutrition.

Just over three-quarters (76.6%) of surveys were both valid and precise, 51.3% were valid, precise and met the quality of measurement criteria. Finally, 35.3% were valid and sufficiently precise, met the criteria for quality of measurement, outcome definition and calculation.

Measles vaccination coverage could be assessed in 57.1% of surveys. Most (72.3%) used card examination and history of vaccination. Just over half (52.4%) of nutrition surveys had an associated mortality survey. Of these, 81.3% assessed Crude Mortality Rate (CMR) and under-five mortality rates (U5MR) while only 18.1% assessed U5MRs.

Among the 158 surveys that assessed CMRs, 55.1% met criteria for sampling validity and the same percentage met precision criteria, 38.6% of surveys were both valid and precise and only 3.2% were valid, precise and met the calculation criteria.

The proportion of nutrition surveys that met criteria for sampling validity, precision, measurement, definition and calculation rose significantly from 11.1% in 1993-4 to 51.7% in 2003-4. The implementation of CMR surveys associated with nutrition surveys increased significantly over the years but the proportion of CMR surveys that met criteria for sampling validity, precision and calculation did not differ.

The lack of validity of the mortality surveys was mainly due to a lack in specificity in the reports as to how household selection occurred. The lack of precision in the CMR surveys was most likely because the sample sizes often used the same sample size calculated for nutrition surveys. Sample sizes for each key variable in a survey must be calculated independently. Many reports lacked structured methodology and results sections and had insufficient detail to allow for proper analysis and evaluation.

The quality of calculations depended upon the software used for analysis. Approximately 33% of calculations performed with EpiInfo 6 were incorrect because oedematous children had not been correctly taken into account. No comprehensive guideline to analyse nutrition surveys using EpiInfo 6 was available before 2004 when a manual that extensively describes the procedure was released.

Only approximately half of surveys assessed measles vaccination. All nutrition surveys among children should include a measles vaccination coverage component and should clearly disaggregate in the report the percentage according to both history and vaccination card as well as card alone.

In the study, precision of nutrition and mortality surveys was analysed assuming a design effect of 2.0 for cluster-sampled nutrition and mortality surveys. However, recent research shows that a design effect of some nutrition and non war-related mortality surveys was below 2.0 and closer to 1.5. If a design effect of 1.5 had been used, the proportion of nutrition and mortality surveys for which the sample size was sufficient would have been higher. Conversely, war-related mortality surveys might have a higher design effect and might require a higher sample size.

The study concludes that several factors are essential to the strengthening of the quality of nutrition and mortality surveys. Appropriate guidelines are now available and need to be widely disseminated; the increased availability and access to the internet in remote areas has improved their distribution. However, the most crucial factor is the availability of well-trained and experienced staff.

The authors cite a number of initiatives to improve and standardise survey methodology, e.g. FAO, through the Food Security Analysis Unit (FSAU) for Somalia since 1994 and the Emergency Nutrition Coordination Unit (ENCU) in Ethiopia. Furthermore, an international inter-agency initiative was launched in 2002 to Standardize Monitoring and Assessment of Relief and Transitions (SMART).

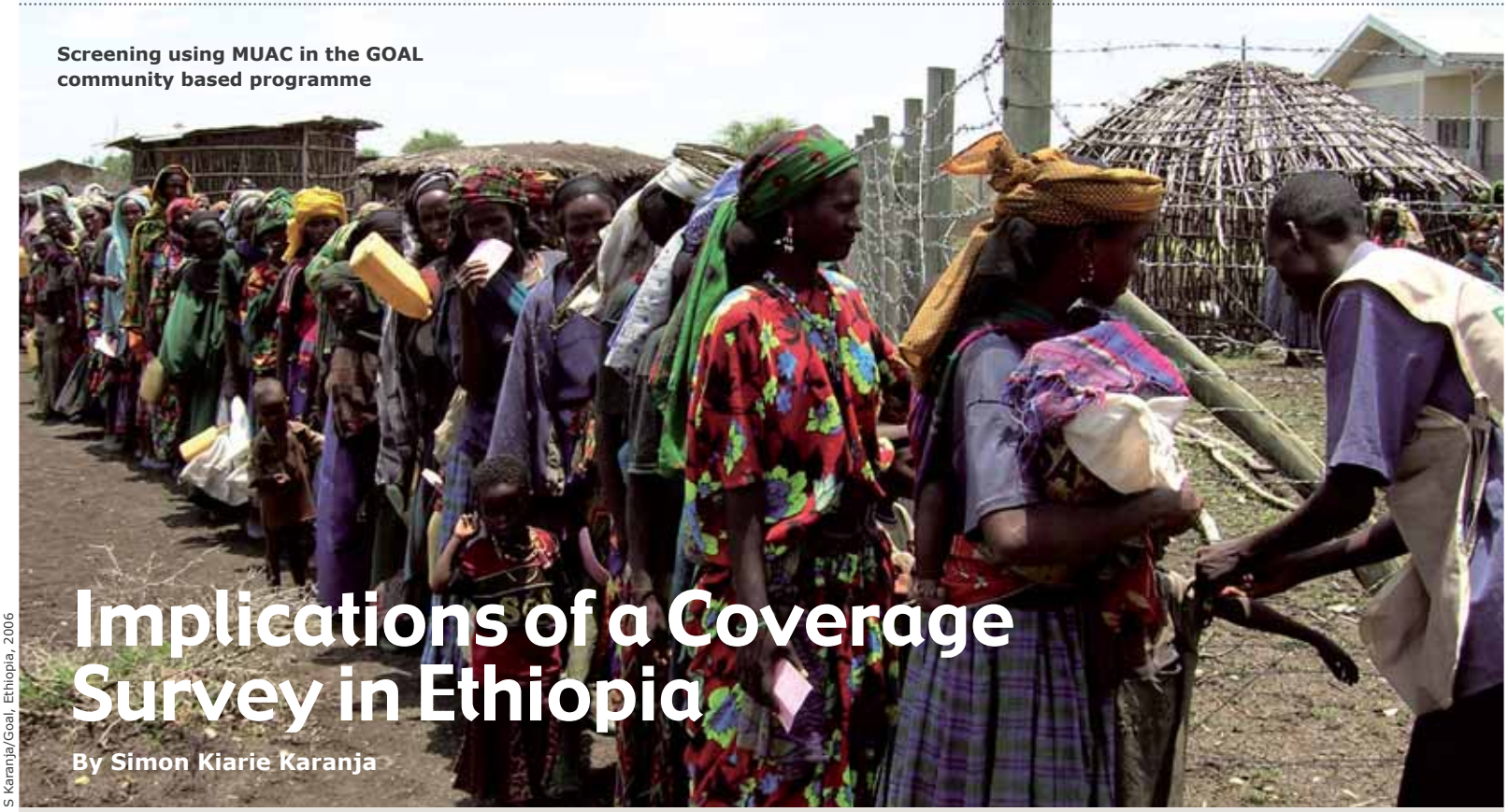
There are still a number of methodological issues in nutrition and mortality surveys in humanitarian emergencies that need further study. These include, but are not limited to, the mapping of the affected populations for first stage cluster sampling and the selection of households for the second stage, documenting different design effects among various outcomes in different situations, and different methodologies to record deaths, births, and migration in mortality surveys. Furthermore, there is a need to consider standardised age distribution in order to compare over different situations for mortality surveys. The introduction of the recently released WHO growth standards suggests important differences in the diagnosis of wasting compared to the National Centre for Health Statistics (NCHS) growth reference and will thus make comparison of trends in malnutrition in different regions more complicated.

Finally, there is a need for a central and accessible site on the internet, not only for survey reports but also the actual data. This repository will help to ensure quality of surveys and aid in future research.

[1] Proudhon C and Spiegel P (2007). A review of methodology and analysis of nutrition and mortality surveys conducted in humanitarian emergencies from October 1993-April 2004. Emerging Themes in Epidemiology 2007, Vol 4:10

Useful webinks

SMART:
http://www.smartindicators.org/index.html
FAO Food Security Analysis Unit (FSAU):
http://www.fsausomali.org
WHO:
http://www.who.int/nutrition/topics/childgrowth/en/index.html
NICS:
http://www.unsystem.org/SCN/Publications/html/rnis.html



Screening using MUAC in the GOAL community based programme

S Karanja/Goal, Ethiopia, 2006

Implications of a Coverage Survey in Ethiopia

By Simon Kiarie Karanja

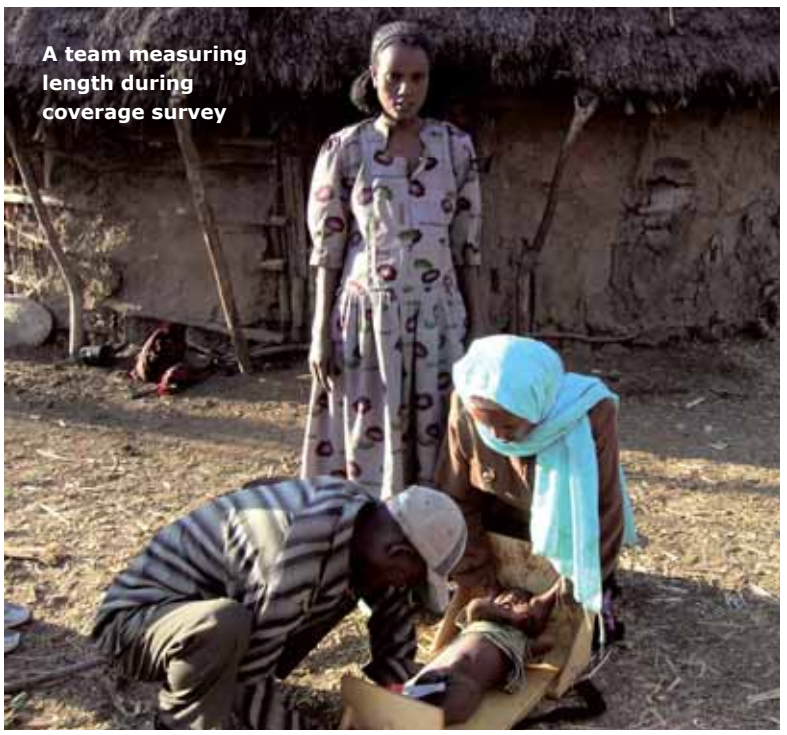
Simon Karanja is currently the regional nutrition advisor with GOAL in East Africa. Previously he worked as the CTC Coordinator for GOAL Ethiopia and as the nutritionist on a Merlin International CTC programme in Wajir, Kenya.

The author gratefully acknowledges the assistance of GOAL Ethiopia Rapid Response programme staff for working hard and ensuring that the data were collected and recorded in the best way possible. Particular thanks to Jessica Barney for her help in organising the survey and special thanks to Angela Davis and Hatty Newhouse for their technical advice and for reviewing and editing the survey report.

This article presents the results of a survey that took place in December 2006 to assess the coverage of a community-based programme and discusses the implications of the findings.

Fedis woreda is located in East Harerghe Zone of Oromiya regional state. The woreda consists of 25 rural and one urban kebeles[1]. The total population is estimated at 246,437, with children under five years estimated at 28,057 (Fedis woreda Council, 2005). The population is predominantly of the Oromo ethnic group, are Muslim, and Afaan Oromo is widely spoken.

The woreda lacks many basic essential services and traditionally suffers from high prevalence of malnutrition and high morbidity rates. Fedis, which is vulnerable to recurring droughts and shocks, is one of the most food insecure woredas in the East Harerghe zone and has received aid relief for over twenty years.



A team measuring length during coverage survey

S Karanja/Goal, Ethiopia, 2007

The livelihood of people in the area centres on agriculture, complemented by livestock holdings. The predominant cash crop is chat. All kebeles members are recipients of various relief activities including the Extended Outreach Strategy/Targeted Supplementary Feeding Programme and Safety Net Programming (general food distribution, Cash for Work and Food for Work).

There are nine functional health facilities within the woreda including one health centre at Fechatu, three clinics and five health posts. There are a total of 27 professional health workers in these facilities including 14 nurses, seven health assistants, two environmental health technicians, two health extension workers, and two frontline health workers. The overall health service coverage is 32% of the total population. The facilities are understaffed and lack basic facilities and equipment. The facility utilisation rate is low in the woreda. The nearest referral hospital for patients in the woreda is Hiwot Fana in Harar City, which is located approximately 35 kilometres away from Fedis.

Community based approach

GOAL Ethiopia has been managing severely malnourished children in Fedis woreda using the community based therapeutic approach since mid 2005, following an initial joint assessment by Care and GOAL Ethiopia at the end of July 2005 that revealed an extensive nutritional crisis, confirming the findings of an earlier survey[2]. The GOAL intervention was designed to promote sustainable capacity within the woreda to address malnutrition. Goal's community-based approach targets all 26 kebeles in the woreda, through five outpatient therapeutic programme (OTP) sites, one stabilisation centre (SC) and eleven targeted supplementary feeding programme (TSFP) sites. The catchment area for the community-based programme is defined by Gandas (villages) within kebeles in Fedis woreda, which the outreach workers visit to find new cases and do follow-ups. The catchment area includes all kebeles currently within what was one but now comprises two defined woredas: Fedis and Midegha (Midegha woreda was initially part of the larger Fedis woreda but was recently created as a separate woreda). As of November 30, 2006, a total of 2352 cases had been admitted to the community-based programme and 442 outreach workers trained. Table 1 presents GOALs OTP and SC admission criteria.

[1] A term used to describe both urban dwelling associations and peasant associations in rural areas.

[2] Conducted by the Federal Disaster Preparedness and Prevention Commission (April 2005) where a Global Acute Malnutrition rate of 19.2% and Severe Acute Malnutrition rate of 2.9% were found.

Table 1 OTP/SC admission criteria

Outpatient Therapeutic Programme (OTP)	Stabilisation Centre (SC)
Weight for Height (WFH) < 70% OR Bilateral pitting oedema **Grade + or ++** OR MUAC < 11.0cm *(age >1year or height >70cm)*	WFH< 80% AND severe medical complications OR MUAC <11cm AND No appetite or severe medical condition OR Oedema Grade + or ++ AND No appetite or severe medical condition OR Marasmic kwashiorkor (alone) OR Bilateral pitting oedema Grade +++ (alone)

Table 2 Area surveyed

Woreda area[2]:	1010 sq km
Number of quadrats:	35*
Area of each quadrat:	5km x 5km = 25 sq km
Area covered by the survey:	35 x 25 = 875 sq km[4]
Period of survey:	7-16 December 2006

*36 quadrats were planned but one was not surveyed due to problems relating to mapping.

Box 1 Sampling procedure[5]

First, each team had to visit one quadrat per day. The four Gandas (villages) closest to the centre of the quadrat were identified for sampling. As a general rule, each team had to complete the screening of at least four Gandas in one day.

Secondly, an active case-finding strategy was used to identify severely malnourished children. A key informant such as a community health worker (CHW), community leader, traditional birth attendant (TBA), and in many cases, a carer, helped to identify severely malnourished children in each Ganda.

The teams were asking for 'types' of children who were likely to be severely malnourished, e.g. thin, sick, oedematous, twins, orphans and children registered in the OTP programme. These terms were defined by the survey team, based on their local knowledge of how people in the woreda would describe malnourished children. All four teams had two or more members fluent in Afaan Oromo, the local language spoken throughout the woreda.

A number of steps were taken to ensure that all cases in a study village were identified through the case-finding method[6]:

- Village heads and mothers were notified in writing or by other means regarding the active case finding and house screening, which was to take place on a specific day.
- No sampling of villages took place on OTP distribution days.
- Villages surrounding a market town were not visited on the market day.
- Every carer, who was visited at their homestead, was probed about their knowledge of other sick, oedematous, or thin children in the community.
- If the sick, oedematous and thin child was absent from home, the team tried to find him/her or come back later.
- If the household had a child in the hospital or the SC, the team noted his name and the child's anthropometric data were obtained from the hospital/SC.
- All children considered sick, thin or oedematous were seen until carers referred back to those children already assessed (sampling to redundancy).
- Outlying houses set away from the main sub-Gandas were included.

Formula 1 Period Cover

$$\frac{\text{Number of respondents in the feeding programme}}{\text{Number of cases NOT in the feeding programme + number of respondents in the feeding programme}} \times 100$$

Formula 2 Point cover[10]

$$\frac{\text{Number of cases in the feeding programme}}{\text{Total number of cases}} \times 100$$

Objectives of the Study

The main objective of the GOAL study was to assess the community-based programme coverage for children 6-59 months of age. Specific objectives were:

1 To assess the OTP/SC coverage.
2 To map out both point and period coverage for the whole woreda and for specific areas within it.
3 To determine factors that affect uptake of the programme services.

Methodology

Study Design

The study involved a cross-sectional survey using centric systematic area sampling (CSAS) and adaptive (or purposive) sampling (two stages). The programme area was stratified geographically using the CSAS method[3]. This method, based on an exhaustive geographical sample, involves dividing the survey area into non-overlapping squares of equal size. The total area surveyed (see table 2) excludes the pastoral area that covers 50% of the total woreda area approximately. In most instances when less than 50% of the quadrat fell within the woreda boundaries, the area was not surveyed – however, some quadrats with less than 50% of the quadrat in the woreda were included due to their high population density. Areas classified as pastoralist areas were also excluded due to difficult access, low population density and because seasonal migration is practised.

Active case finding was used in the second stage of the study. Approval for the coverage survey was obtained from both the Zonal Health bureau and the woreda Health Office. The sampling method was based on a spatial sampling method and an active case-finding strategy (see box 1).

Implementation of the Survey

Training/Data Quality Control

Four teams, each made up of two enumerators and one team leader, carried out the survey. To ensure standard data collection, all team members underwent two days training on anthropometric measurement, admission and discharge criteria, and signs of malnutrition. A local events calendar was developed to establish the age of children without vaccination card/exact age.

Validation Sub-study

A one day capture-recapture study was carried out (using active case finding and house-to-house methods)[7] to test the sensitivity of the active case-finding method used during this coverage survey[8]. This confirmed 100% accuracy of the method in locating children enrolled in OTP/SC in Fedis woreda. In addition, team members gained practical experience while the study helped identify those without sufficient experience and skill in anthropometric measurement[9].

Data Processing and Analysis

Data were analysed in Microsoft Excel and SPSS v10. Point coverage and period coverage were calculated as below. Period coverage is the conventional approach used by agencies such as Medecins Sans Frontieres (MSF), Save the Children and UNICEF and is the most commonly reported. In order to obtain the most sensitive coverage calculation (i.e. leaving out as few cases as possible), a MUAC < 12.0cm cut off point was used to screen children eligible for full anthropometric assessment.

Constraints

The map was several years old (1994) and no kebele or Gandas names were included on it. The map also included areas belonging to a neighbouring woreda (Babile). In order to remedy this problem, local knowledge was used to plot the kebele and Gandas names on the map. In several cases, the precise locations of Gandas were uncertain which might have meant that some sampled villages were not necessarily those closest to the centre of the quadrat. There may also have been instances when carers provided inaccurate information about whether a child was or was not in the programme.

[3] Mark Myatt. New method of estimating programme coverage. Community Based Approaches to Managing Severe Malnutrition. ENN report on the proceedings of an inter-agency workshop. Dublin 8-10th October 2003. Available at www.ennonline.net
[4] Area surveyed is approximately 87% of total area.
[5] Valid International, 2006. Notes on using Capture-recapture techniques to assess the sensitivity of rapid case finding methods.
[6] Feleke T. 2004. Selective Nutrition Programme Coverage Survey Report. Hulla and Arbegona Districts. Ethiopia. Valid International.
[7] Monica Zanchettin. Selective Nutrition Programme Coverage Survey Report for Awassa Zuria Woreda, Ethiopia. Feb 2006. Valid International Ltd and GOAL Ethiopia.
[8] The data gathered during the validation study was not part of the coverage calculations.
[9] Two key references used to inform the validation study were: Fekele T., Myatt, M., Collins, S., Sadler, K., 2003, Feeding Programme Coverage Survey for Severely Malnourished Children: Dowa and Mchinji Districts, Malawi, Valid International, and Fekele, T., 2003, Feeding Programme Coverage Survey: Kalu and Desie Zuria Districts, Ethiopia, Valid International.
[10] The overall percent coverage is the average of all quadrat percentages coverage.

Figure 1 Point coverage for OTP/SC

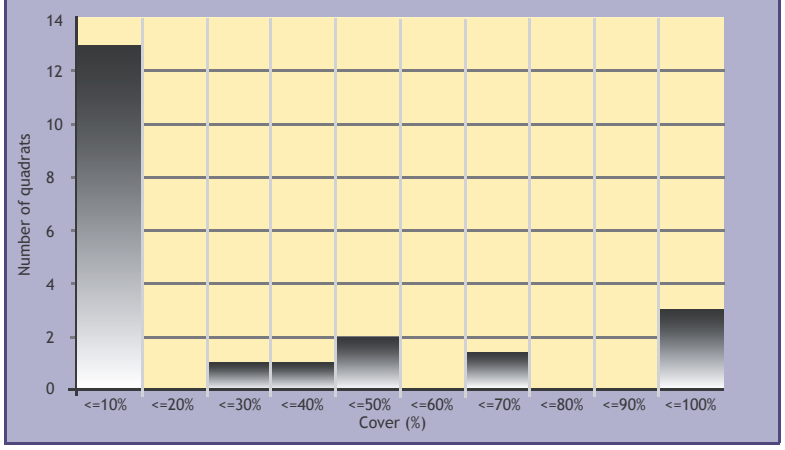


Figure 2 Period coverage for OTP/SC

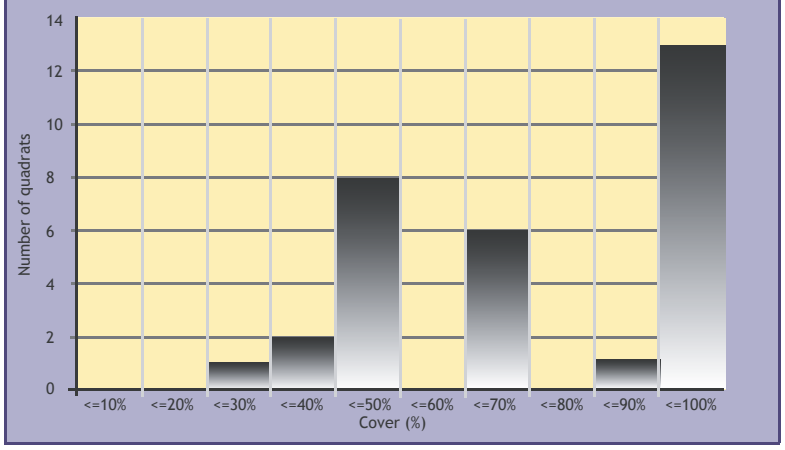


Table 3 Source of knowledge about GOAL's CTC programme

Individual	Percentage
Neighbour/Word of mouth	74%
Community mobilisers	12%
Health extension agents	6%
Health Centre Staff	5%
Kebele Leader	3%

Table 4 Reason for not taking child to the OTP/SC site

Reason (carers could provide more than one response)	n	Percent of responses
Carer thought child was sick but not malnourished	5	45.5
No other carer to look after other children	3	27.3
Mother carer too busy	2	18.2
OTP site too far away	1	9.1

Results and Discussion

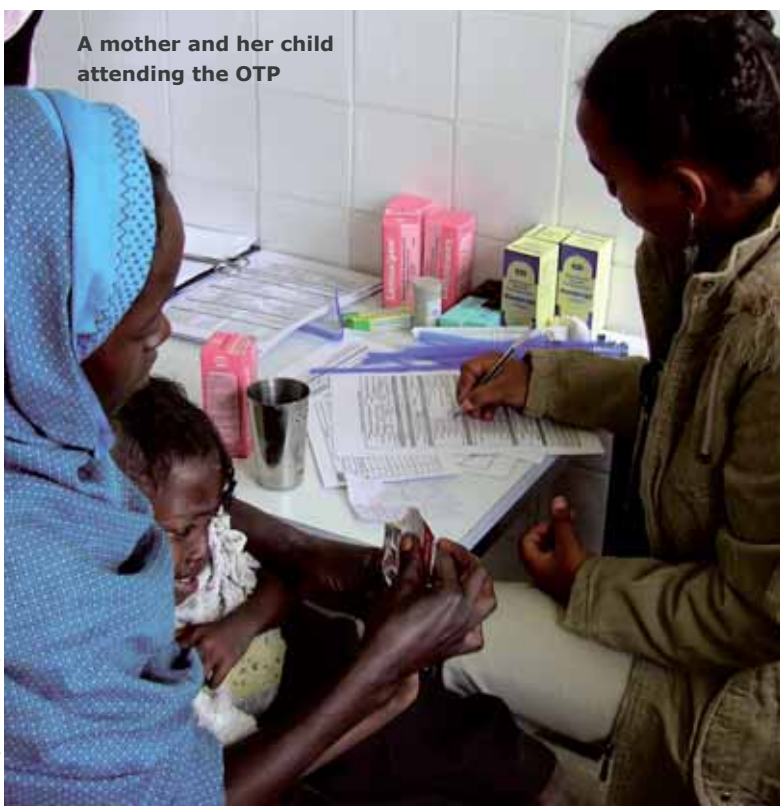
Point Coverage

The point coverage refers to the ratio of cases receiving treatment found in the sample to the total number of cases requiring treatment found in the sample[11]. Figure 1 presents the point coverage histogram for OTP/SC.

The point coverage in Fedis woreda was poor across the entire programme area. Thirteen quadrats had a point coverage of less than 10%, while only two quadrats had a point coverage of 100%. There was no correlation between the point coverage and distance from the OTP/SC sites.

Period Coverage

Period coverage includes children who may not be eligible for entry into the programme on the day of the survey (i.e. children who are in the recovery phase and whose weight-for-height and/or MUAC is higher than that required for entry into the programme or who no longer exhibit nutritional oedema). These children, now in recovery, were recently severely malnourished. Period coverage is an estimator of recent coverage in a given period[12].



A mother and her child attending the OTP

S Karanja/Goal, Ethiopia, 2006

Period coverage was high across the programme area with 10 quadrats having period coverage of 100%, and 15 quadrats having coverage of equal or greater than 50% (see figure 2). Only three quadrats had a period coverage equal or less than 40%. The average coverage for the woreda was 70.5%. The Sphere guidelines state that the coverage of therapeutic and supplementary feeding programmes should be greater than 50%[13]. GOAL's community based programme in Fedis woreda does meet these recommended guidelines when measured by period coverage.

Anthropometric assessment

Out of 35 severely malnourished children identified during the survey, five (14.3%) had oedema, one (2.9%) had a Weight for Height % of the median (WFH%) <70% and 29 (82.9%) had a MUAC <11cm aged between 12 to 59 months. Of the 25 severely malnourished children not in the programme at the time of the survey, 19 (76%) had a MUAC <11cm, five children (20%) had oedema, and one (4%) child had a WFH%<70%. The very high proportion (76%) of severely malnourished children identified through MUAC measurements might, in part, account for the low point coverage results found in this survey. Sixty percent (21/35) of the severe cases identified based on MUAC had a MUAC between 10.7 and 10.9 cm (inclusive).

In such a context, MUAC measurements need to be very precise as a slight inaccuracy in taking MUAC measurements can have a great impact on coverage estimates. It is possible that a number of the children with MUAC <11.0 cm with an age between 12 to 59 months would not have been detected by trained community health workers. In addition, difficulties establishing exact age may have led to MUAC based assessment being employed for infants under 12 months who were inappropriately identified as over 12 months of age[14]. This could also have contributed to a downward bias in the point coverage results.

Outreach/mobilisation strategy

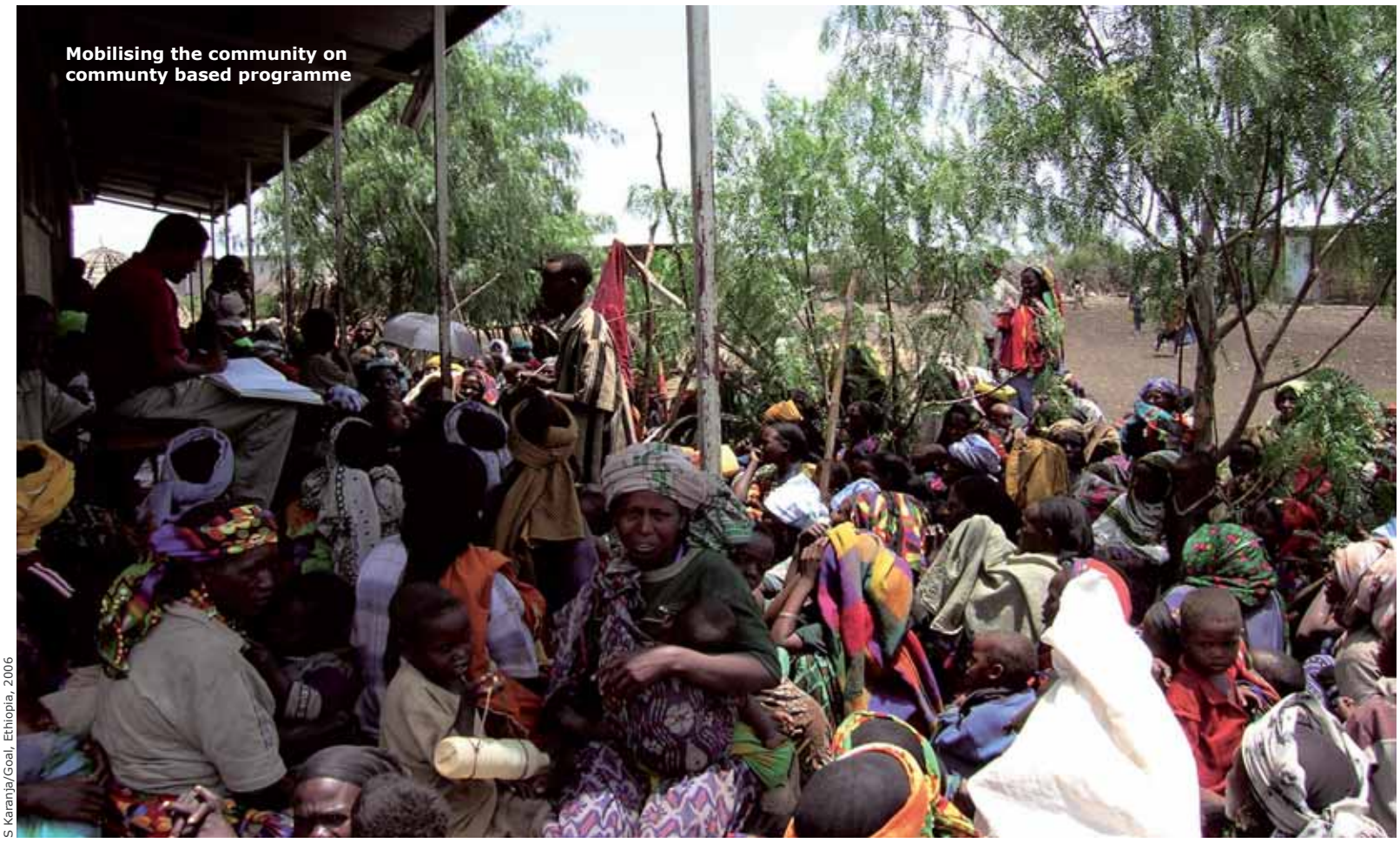
Programme knowledge was on average very high in the programme area. Of the total children screened, 98% of the carers/mothers knew about the programme. Table 3 shows how people came to know about the programme. While the vast majority (74%) learned through word of mouth/neighbours, only 5% of carers were informed by their local health facility and 3% by kebele leaders. This suggests poor linkage between OTP activities and other health facility activities and a need to re-think the mobilisation strategy involving community leaders.

[11] In coverage survey, the cases are the denominator. This means that quadrats with zero cases are treated as "N/A" (not applicable) data point. The 'N/A' quadrats do not contribute to the overall coverage estimate (personal communication; Mark Myatt)

[12] Myatt M, Feleke T, Sadler K, & Collins S. 2005. "A Field Trial of a Survey Method for Estimating the Coverage of Selective Feeding Programme". Bulletin of the World Health Organization. Vol. 83, no. 1, pp.20-26.

[13] The Sphere Project, 2004, The Sphere Project, Oxfam Publishing, p.148

[14] According to current programme admission criteria, MUAC should not be used for infants under 12 months of age.



Mobilising the community on communty based programme

S Karanja/Goal, Ethiopia, 2006

Timing of the survey

The survey was carried out in the post harvest period which is a relatively food secure time of year in Fedis woreda. This correlates with the low programme admissions that may, in turn, bias the point coverage results downward as not many children were registered in the OTP programme. It is also possible that a number of the severely malnourished had experienced rapidly deteriorating nutritional status due to illness and that there had not been sufficient time to be admitted into OTP.

Awareness of the CTC programme

Throughout the survey, a questionnaire was completed by 23 carers whose severely malnourished children were not in the community-based programme, but who had heard about it. Fifteen carers (65.2%) had taken their child to an OTP site in the past but were not admitted due to various reasons e.g. child did not fit OTP admission criteria at that time. Two carers never took their child to an OTP ever. Reasons for not taking their child to the OTP/SC site are given in Table 4. These findings suggest that more community education about the signs and symptoms of malnutrition could increase coverage.

Past history/referrals

Carers of severely malnourished children who were not in the OTP but knew about it, were asked if their child had ever been in the GOAL CTC programme before. The vast majority, 73.9% (17/23), said that the child had not been in the programme in the past. Five out of 23 carers (21.7%) said that their child had been in the programme and had been discharged. Children who had relapsed were enrolled in the SFP programme. One child was in the programme but defaulted as the carer thought the child had recovered. With sustained outreach efforts and by strengthening the integration of community based management of malnutrition activities with the existing outreach system, this proportion of severely malnourished children who have never been enrolled in the programme is likely to decrease. Stronger linkages between the SFP and OTP programmes need to be established to ensure that children in the SFP can be referred to the OTP if their nutritional status deteriorates.

Acceptance/rejection rates – malnourished children

Carers of malnourished children found who were not in the OTP/SC but knew about it, were asked if the child was ever referred to a GOAL OTP/SC site. Fourteen (60.9%) of 23 respondents had while 39.1% (9/23) had not. On referral, over half (57.1%) were rejected because they did not fit the programme admission criteria. A number of carers who brought their child to the OTP site might have done so at a time when their child did not fit the admission criteria and was therefore rejected. Subsequently, when their child's situation deteriorated, carers may have been unaware that they could bring their child again for re-assessment. This phenomenon could bias coverage downward and could be easily remedied by having all programme staff and health/community workers explain to carers they should re-present children in the event of further nutritional deterioration.

Recommendations

Improved and sustainable high coverage of the CTC programme could be achieved by:

- Strengthening the training of CHWs with regard to the signs and symptoms of malnutrition and encouraging CHWs to include an educational message as part of their community mobilisation and outreach activities.
- Providing health and nutrition education to health staff and community health resource persons that will have a positive impact on changing the behaviour of the community with regard to childcare and feeding practices, with special emphasis on children with special needs, e.g. mentally and physically handicapped.
- Developing effective techniques for identifying and managing cases with psychosocial causes.
- Strengthening community mobilisation messages to enhance the communities' understanding of the community-based programme, e.g. admission and discharge criteria, importance of completing treatment, and of returning if their child deteriorates after discharge or was rejected and subsequently deteriorates further.
- Strengthening linkages at the health facilities through ongoing capacity building of the woreda's health officials in order to maximise the likelihood that all carers bringing in sick children to their local health facility are referred onto the OTP if their child is malnourished.

Conclusion

Generally, the programme coverage is high and meets the Sphere standard set out for coverage of therapeutic feeding programmes in rural areas. The high programme coverage of 66% was achieved mainly through sustainable methods of community mobilisation. The mobilisation efforts were integrated into existing Ministry of Health outreach system and other community based institutions. Community volunteers, TBAs, Community Health Advocates (CHAs), Community Hleath Promoters (CHPs) and malaria agents, all active in routine health facility outreach activities, have played a significant role in community mobilisation, absentee and defaulter tracing. There is however room for further improvement and the coverage survey has helped identify how this might be achieved.

For further information, contact: Simon Karanja,
email: skaranja@goalkenya.org

Mental Health among Children in Severe Food Shortage Situations

A paper on the 'Mental Health and Psychosocial Well–Being among Children in Severe Food Shortage Situations' has been prepared in a WHO inter-departmental collaboration.

Food shortage contributing to malnutrition and micronutrient deficiency can inhibit intellectual and physical development. In addition, during food crisis, caregivers may be unable to provide psychosocial stimulation for their children due to their own physical or mental ill health.

Psychosocial stimulation refers to the extent that the environment provides physical stimulation through sensory input (e.g., visual, auditory, tactile), as well as emotional stimulation provided through an affectionate caregiver-child bond. Children under two years are particularly vulnerable to nutritional and psychosocial deficits. Nutritional deficiencies and lack of stimulation creates a vicious cycle where a malnourished child becomes less demanding and invites less interaction. Improving both nutritional status and stimulation has an added impact on a child's development and combined nutrition/stimulation interventions should be used.

In terms of micronutrients, both iron and iodine are essential for cognitive development. It is critical to prevent deficiency of either during pregnancy and the first two years of life especially.

Prevention strategies outlined in the paper include:

- Information on appropriate feeding practices and psychosocial stimulation to key groups, including donors and humanitarian aid workers.
- Psychosocial support and education to caregivers, with extra support to caregivers with mental or physical health problems. Improving maternal mental health may be one of the most important interventions for a mother and child in situations of severe food shortage.
- Protection and support of breastfeeding, for its nutritional, anti-infective and mother-child bonding properties
- Ensure all households have adequate quantity and quality of food.

Wherever possible, community or home-based selective feeding programmes with a psychosocial stimulation component should be used to treat malnutrition.

Where centre or health facility based treatment is needed, psychosocial elements should be in-corporated that include:

- Educating caregivers and healthcare providers about the negative consequences of sensory deprivation in a culturally sensitive matter, e.g. practice ofwrapping or tying undernourished children.
- Encouraging the caregiver to be present in the feeding centre and to actively be involved in the feeding and care of the child.
- Encouraging informal child-based play groups and creating a stimulating environment for children.

Guidance on psychosocial stimulation, with examples to improve child-caregiver interaction in programming, are included in the paper, and key resources are listed to support the psychosocial component of inpatient and community based care.

For further information, contact Dr Jodi Morris, email: morrisj@who.int or Dr Mark van Ommeren, Mental Health: Evidence and Research Team,email: vanommerenm@who.int

The paper is available online at: www.who.int/mental_health/mental_health_food_shortage_children2.pdf

Simple tools for measuring household food access and dietary diversity

Summary of international workshop[1]

An international workshop on simple tools for measuring household access to food and dietary diversity was held on March 21-23, 2007 in Nairobi. The workshop was sponsored by the Nutrition and Food Safety Division of FAO (AGN) as part of the EC/FAO Food Security Information For Action Programme, in collaboration with the Food and Nutrition Technical Assistance Project (FANTA)

The purpose of the workshop was to bring together experts in food security and nutrition from governments, universities, and international agencies, to discuss the utility of the tools that AGN is promoting and to identify potential areas for their integration into food security information systems at national and decentralised levels.

The main workshop objectives were to:

- Generate an increased understanding of innovative and simple methodologies and tools for measuring household access to food and dietary diversity.
- Explore how the tools can be applied and integrated to improve food security information systems.
- Discuss how the tools could be used in decision making for programming and targeting.
- Strengthen collaboration at national and international levels.

The workshop brought together food security and nutrition experts from institutions and organisations in nine countries to discuss the following tools to measure household and individual food consumption characteristics:

Household Food Insecurity Access Scale (HFIAS) is a 9-item scale to measure the prevalence and severity of household food insecurity in developing countries. The HFIAS is based on universal situations or experiences households may have when faced with limited access to food - feeling anxiety and uncertainty about the household food supply, altering personal food preferences and reducing quantity of food consumed.

Dietary diversity questionnaires assess the variety of the diet by adding up the number of food groups eaten by household members or individuals in the 24 hours prior to the interview. The assessment includes the number of different food groups consumed (variety), and the types of food groups consumed (quality).

Culturally specific questionnaire adaptation and refinement are needed for both the HFIAS and the dietary diversity questionnaires before applying to a population survey.

The tools were reviewed in a structured manner to identify their strengths and weaknesses and the feasibility of their application in a number of settings. Overall, there was agreement that the HFIAS and dietary diversity questionnaires could be appropriately used in a number of data collection settings and in food security and nutrition information systems. More specifically, the workshop had three key outcomes:

- Agreement on the need to achieve standardisation of the tools and to engage in further work towards this goal.
- Identification of practical ways of integrating the tools to generate information for policy-making and programming.
- Agreement on the need to establish a users' network to exchange information on practical use of the tools.

A full report on the workshop is in preparation.

For more information, contact: Terri Ballard, FAO, Nutrition headquarters, Italy, email: Terri.Ballard@fao.org

[1] Executive Summary. International Workshop. Simple tools for measuring household access to food and dietary diversity. March 21-23, 2007. Nairobi.

Joint UN Statement on Community–based Management of Severe Acute Malnutrition

A Joint Statement by the World Health Organization (WHO), the World Food Programme (WFP), the United Nations System Standing Committee on Nutrition (UNSCN) and UNICEF on Community-based Management of Severe Acute Malnutrition has been released.

The joint statement describes how severe acute malnutrition remains a leading cause of death in children under five years of age. Until recently, treatment has been restricted to facility-based approaches, greatly limiting its coverage and impact. New evidence suggests, however, that large numbers of children with severe acute malnutrition can be treated in their communities without being admitted to a health facility or a therapeutic feeding centre.

The community-based approach involves timely detection of severe acute malnutrition in the community and provision of treatment for those without medical complications with ready-to-use therapeutic foods (RUTF) or other nutrient-dense foods at home. If properly combined with a facility-based approach for those malnourished children with medical complications and implemented on a large scale, community-based management of severe acute malnutrition could prevent the deaths of hundreds of thousands of children.

The joint statement also addresses community based management in the context of high HIV prevalence and given the overlap between malnutrition and HIV infection and AIDS, recommends strong links between community-based and AIDS programmes.

Investing in prevention of malnutrition is essential and interventions may include investing in high quality food and health care, support for exclusive breastfeeding for six months and improved complementary feeding practices for children 6-24 months. At the same time, treatment is urgently needed for those already malnourished. The statement states the community-based approach should be added to the list of cost-effective interventions to reduce child mortality.

The joint statement lists what countries can do, through adopting national policies and programmes that ensure national protocols for the management of severe malnutrition have a strong community based component; and by ensuring that coverage, training at all levels, and referral systems are addressed. In addition, countries can act by providing the resources needed for management of severe malnutrition and by integrating the management of severe malnutrition with other health activities.

The statement details how WHO, WFP, UNSCN and UNICEF will support country activities, for example by mobilising resources to support implementation of recommendations and facilitating local procurement or production of RUTF.

The statement concludes with a technical annex on RUTF, including referenced information on producing RUTF locally[1].

The joint statement is available in English and French and can be found at:

http://www.who.int/nutrition/topics/statement_commbased_malnutrition/en/index.html

[1] Available at http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/CBSM/tbp_4.pdf).

Food and Nutrition Security Training Programme in the Netherlands

This training programme at Wageningen International, The Netherlands aims to provide the course participants with knowledge, skills and motivation to identify, plan and implement effective action to address food and nutrition security at various levels, ranging from (national) policy level to regional, community, household and even individual level programmes.

The training programme can be followed as a complete 11 weeks' programme, which leads to a diploma at postgraduate level or as 'stand alone' certificate courses.

Next course dates: March 31 – June 13, 2008

Course Content

- Key concepts and current issues in nutrition
- Nutrition communication and promotion; a new approach to nutrition education
- Food and nutrition security in the context of HIV/AIDS
- Monitoring and evaluation of impact on food and nutrition security.

A limited number of fellowships are available for the complete training programme from the Netherlands Fellowship Programme (NFP). Candidates who wish to apply should begin the application procedure as soon as possible (see contacts below for details). The application deadline for non-fellowship candidates is 29TH of February 2008. Further information is available from fannie.deboer@wur.nl or by fax +31 317 495395.

Application forms and a detailed brochure are available at http://www.cdic.wur.nl/UK/courses or from Wageningen International, P.O. Box 88 6700 AB Wageningen, The Netherlands. Tel: +31 317 495 495, fax: +31 317 495 395, email: training.wi@wur.nl

World Conference of Humanitarian Studies

Dates: 4-8 February 2009

Location: University of Groningen, The Netherlands

The Universities of Bochum, Groningen and Wageningen are organising the first World Conference of Humanitarian Studies to encourage debate and dialogue between different research groups, policy actors and implementing agencies over a wide range of disciplines related to humanitarian action.

The World Conference aims to reflect one of the key characteristics of humanitarian studies: the close collaboration and dialogue with policy makers and practitioners. Hence, it is open to participation by all these groups.

As a World Conference, it aims to establish a global representation of humanitarian studies and foster interdisciplinary debate on a grand scale. Its central aims are:

- to provide a meeting ground for academic communities and practitioners concerned with in-depth research on humanitarian issues;
- to take stock of the current theory, debates, and issues of humanitarian studies;
- to reflect on current practice and identify opportunities for improving humanitarian practice; and
- to involve Southern scholars and practitioners more strongly into humanitarian politics, responses, debates, and studies.

An estimated 500 participants from a variety of institutions, universities, NGOs and other relevant organisations, associations, governmental departments, and intergovernmental agencies will participate.

The organisers have issued a call for paper and panel proposals.
The deadline for submission for panels is 1 February 2008, for abstracts is 1 September 2008 and for early bird registration is 1 November 2008.

The conference fee is 200 euro (150 euro for early bird registration) and 100 euro for PhD students.

Guidelines for Participants on the Conference and updated details can be found at the website http://www.humanitarianstudies2009.org

For more information, email: info@humanitarianstudies2009.org

Translated versions of the Operational Guidance on IFE

The Operational Guidance on Infant and Young Child Feeding in Emergencies (IFE) is now available in English, French, Spanish, Portuguese, Arabic and Russian. Translations into Chinese, Japanese, Kiswahilli and Bahasa (Indonesia) are well underway.

All translations are available on the ENN website, http://www.ennonline.net, under IFE.

Print copies in English and French (along with a small stock of Spanish and Portuguese) are available from ENN, email: ife@ennonline.net

Spanish and Portuguese print copies are available from IBFAN Latin America and the Carribean (LAC), contact: Marta Trejos, CEFEMINA, Coordinación Regional IBFAN LAC, San José, Costa Rica.
Tel: 506 / 2201724, fax: 506 / 2906073,
email: cefemina@racsa.co.cr
website: www.cefemina.org or www.ibfan-alc.org

Arabic print copies are available from IBFAN Arab-World, contact: Mohamed Marwan, email: marwan@ibfan-arabworld.org

IASC Nutrition Cluster: Key Things to Know

The Inter-Agency Standing Committee (IASC) have recently produced a 'Note' about the Cluster Approach which includes details about the Nutrition Cluster component.

Cluster Approach

The 'cluster approach' is a mechanism that addresses identified gaps in emergency response and enhance the quality of humanitarian action[1]. It is part of a wider UN humanitarian reform process, aimed at improving the effectiveness of humanitarian response by ensuring greater predictability and accountability, while at the same time strengthening partnerships between NGOs, international organisations, the International Red Cross and Red Crescent Movement1 and UN agencies.

In September 2005, the Inter-Agency Standing Committee (IASC) agreed to designate global 'cluster leads' specifically for humanitarian emergencies in nine sectors or areas of activity, including nutrition, water and sanitation (WASH) and health. These nine sectors have been increased to eleven with the recent addition of education and agriculture. It was agreed the cluster approach should also be applied at the country level and for a fixed duration of two years at the global level.

IASC Nutrition Cluster

UNICEF is the designated global lead agency of the IASC Global Nutrition Cluster. There are 34 United Nations (UN) agencies, non-governmental organisations (NGOs), donor, and academic/research partner organisations at global level. At the country level, the composition varies but the usual lead agency is UNICEF with partners including WHO, WFP, FAO, UNHCR and NGOs.

The Global Nutrition Cluster provides support to the international community and has provided concrete tools and support to the country based Nutrition Cluster in the following areas:

- Coordination with information sharing at global level and from country to global level.
- Capacity Building, including training needs analysis, roster of available people.
- Tools and approaches to improve readiness, response, assessment, monitoring and reporting.
- Supply, including Ready to Use Therapeutic Foods (RUTFs) and micronutrient powders and pastes.

For implementation, it is important to work with the national structures and other clusters where they have been initiated, in particular the Health, Water, Sanitation and Hygiene (WASH), Education, Protection and Logistics Clusters. In addition, various NGOs work with the cluster on a geographical and technical area basis. The Nutrition Cluster is working in four pilot countries: Democratic Republic of Congo (DRC), Liberia, Somalia, and Uganda. In addition, the Cluster is active and pending in a number of other countries including Pakistan (for the recent floods), Ethiopia, Chad, Guinea, CAR, Haiti, Sudan, Madagascar, and Zimbabwe. It is envisaged that the Cluster Approach will be implemented in approximately 25 countries where there is a Humanitarian Coordinator and in a number of other countries as a result of a sudden onset emergency, as was the case in Pakistan with floods in July.

The Cluster Approach is envisaged as a mechanism for improved preparedness and response both in slow onset and rapid onset emergencies. The configuration and role of the Cluster depends on the level of government involvement, type of emergency, needs, and extent of the emergency.

Overview of Cluster goals and priorities

A number of strategic focus areas ('gaps and opportunities') have been identified by the Cluster partners. They include:

Coordination: organisations often focus on one or parts of the underlying causes of under-nutrition – disease, food, care, or water, sanitation and environment – often without coordination. This is partly due to a lack of leadership amongst agencies in the sector and partly due to the lack of incentives to work together as agencies compete for diminishing funds and position. Defined and measurable goals with negotiated strategies and benchmarks to achieve these goals will provide the basis for coordination.

Capacity Building: changing needs, combined with mobile technical staff and often depleted national capacity, complicate mounting a predictable, standardised and sufficient response in emergencies. Capacity building goes beyond training and includes preparedness, response, assessment, monitoring, evaluation, reporting, protocols and supplies. Building and supporting a surge capacity at the country and global level continues to be at the core of the emergency response. The global cluster lead is also responsible to ensure that cross-cutting issues (including environment, gender and HIV/AIDS) are properly mainstreamed in humanitarian response.

Emergency Preparedness, Assessment, Monitoring, Surveillance and Response Triggers: At the onset of a humanitarian disaster, there is a need for:

- Further development of clear and unambiguous internationally accepted criteria to classify the different types of a 'nutrition emergency'.
- Clear standards to guide the response including eligibility and exit criteria
- Transparent processes and accountability that are established and supported by all stakeholders.
- A commonly agreed upon methodology for data collection (what to collect, from whom, by whom) and a process for analysis, interpretation and reporting.

Progress has already been made in some areas.

Supply: Too many examples exist of humanitarian response delayed by a lack of appropriate supplies. Pre-positioning supplies, stand-by agreements, facilitating in-country procurement, and clarifying operational procedures for procurement would greatly remedy this situation. The selection of products hampers response, especially in the area of the recently developed special foods such as RUTFs and Ready to Use Supplementary Foods (RUSF). RUTF and RUSF represent a technical step forward that should be translated into policies and procedures for their production, procurement, distribution and use.

The international donor and emergency response community looks to the Cluster Approach as a means to accelerate and improve emergency response. Together with the Country Nutrition Clusters, the Global Cluster partnership aims to provide stewardship by improving the regulation, standard setting and priority setting. The Cluster also aims to assist mobilising, harmonising and ensuring better distribution of financial resources including improvements in supply in order to reduce costs and take advantage of economies of scale. The Cluster provides services including technical support in the generation and management of information, as well as key technical support as needed. The Cluster does this in situations where the local governments are unable or unwilling to provide that assistance themselves. Finally, the Nutrition Cluster is working with national and global partnerships to improve training, capacity building and also to derive answers to some of the most pressing policy and operational challenges.

For more information, contact Global Nutrition Cluster Coordinator: Bruce Cogill,
email: bcogill@unicef.org
or visit http://www.humanitarianreform.org/

[1] IASC Guidance Note on using the cluster approach to strengthen humanitarian response. 24 November 2006. IASC Nutrition Cluster. Key Things to Know. 21 March 2007. Both available at http://www.humanitarianreform.org/

Recently, ENN was party to an exchange of questions and discussion between field staff and 'experts' relating to decisions on the use of ready-made therapeutic products versus those made from modular ingredients in the management of severe malnutrition. Those involved have agreed to share this exchange with the Field Exchange readership as they feel this is an issue that needs 'airing'. The ENN would welcome contributions from the Field Exchange readership on this topic. Email any comments to marie@ennonline.net (eds).

Questions from the field

Fondation Terre des hommes (Fondation Tdh) is a Swiss based non-governmental organisation (NGO) that supports the treatment of acute severe malnutrition in a hospital in Nouakchott, Mauritania. A recent field trip led to a query over whether the use of Nutriset F100 and F75 'ready made' products over the use of therapeutic milks made up from oil, milk, sugar and CMV therapeutic was advised, and if so why. This letter was directed by Fondation Tdh to Mike Golden as an expert on the management of severe malnutrition who had recently returned from Mauritania, therefore having a good understanding of the context being discussed.

Dear Mike,

Currently Fondation Tdh provides dry skimmed milk and CMV Therapeutic to the hospital to make up therapeutic milk. Oil, sugar and flour are bought locally. We are concerned that in a non-emergency setting like Mauritania, use of ready-made products risks creating a large-scale dependency on expensive externally imported products. What happens if the funding stops? Also, ready-made products diminish the importance of the role of the kitchen in the treatment of severe malnutrition – still necessary for preparing complementary foods for phase 2, but will this also be undermined if modular feeds are no longer needed? We also have concerns about the environmental aspect of their use and the problems with ensuring a continuous flow of products.

Many may be wondering if the reason for our concern relates to the fact that we provide milk (Swiss made!). But this really is not relevant. Milk could be obtained locally and it is not too expensive. Of course there would have to be a quality assurance system in place to ensure that the locally obtained milk is safe for use in therapeutic milks.

Are ready formulated products less error prone, and much easier to use?

What about the long-term sustainability issues in non-emergency contexts?

Do patents on products mean there is a monopoly on their production? And ultimately what should we advocate as an NGO working in this context - continue to push for locally made mixes with imported added CMV Therapeutic (as we currently do) or go for the more ready-to-use alternative?

Our gut feeling is towards the more 'sustainable' option – modular feeds - but the answer is not clearcut and we would really appreciate your feedback on this.

Regards,
Rebecca Norton and Jean-Pierre Papart
Nutrition/health advisors, Fondation Tdh

Response

Dear Rebecca,

You are not alone and the questions that you raise recur in most countries. There are several issues here.

Ingredients
Home-made products have a higher than desirable osmolarity, especially F75 made up with sugar alone, and can induce diarrhoea in a few children - the sickest being the most vulnerable to this. Quality control is difficult to achieve using modular feeds. (This may be due to wrong recipes being used, incorrect scoops, excess amounts of CMV therapeutic being added, inaccurate translation of measurements into 'local' measures using cups, etc, careless measuring and lack of supervision).

There is also variability in the products used. All oil is not the same - while the commercial product is governed by strict specifications in terms of fatty acid, vitamin and sodium content, this is not the same for the modular feed where in practice, most will go to the market and get the cheapest oil available. The peroxide level of the fat is also important, vegetable oils easily become rancid generating high peroxide levels that place at risk children who have very little in the way of anti-oxidants. Similarly, locally sourced Dried Skimmed Milk (DSM) may not meet the low sodium and iron specification that commerical manufacturers source to make therapeutic milk.

At one level, one can "get away" with using any local ingredients and the differences in the recovery of the children are likely to be quite subtle. But the risk is we are falling way short of the recovery we know we achieve with the modern (commercial) diets.

There are actually advantages of not having to rely on a kitchen to prepare milk, like you need with the modular feeds. Therapeutic milk can be prepared as needed (e.g. during the night) and in facilities without kitchens or additional staff, but that otherwise have the capacity to manage severely malnourished children, such as in health centres. Stock control is also an issue when ingredients have a household use and are of 'interest' to workers. Empty packets of F75/F100 that are returned to the pharmacy is a more secure control system, than trying to monitor usage of milk powder, sugar and oil.

Sustainability
Regarding sustainability, at one level it is a question of commitment, perceived need and, of course, cost. It is also a question of whether these therapeutic products are foods or medicines! The question of sustainability only really arises because they are perceived as foods and there is food available locally. If we think of them as medicines, then it is different. None of the medicines used in modern medicine are 'sustainable' in most developing countries. If we do not question the sustainability of measles vaccine, vitamin A capsules, folic acid tablets and antibiotics, why, we should ask, do we question the sustainability of F75 supply?

By sustainability we ask, in effect, questions like "do we need it", "must we have it", "must we import it", "can we afford it", "who will pay for it", "what will be the effect of not having the product", "can we do it more cheaply or efficiently", etc. The answers to these questions are becoming clearer.

1) The protocols work! In Ethiopia, for example, 20,000 children are being treated each month (nearly a quarter of a million per year) with a mortality rate of around 3.5%. This is a very major advance on what was happening only a few years ago when the mortality rates were around 20-40%. Special products such as therapeutic milks (especially F75) and Ready to Use Therapeutic Foods (RUTF) have revolutionised the management of severe malnutrition (but see below about causes of mortality). So let us say that some sort of product is needed.

2) Treatment of the severely malnourished is a cost effective way of saving life, even compared to other public health interventions. The cost of saving a life with measles vaccination campaign or vitamin A capsule distribution is of the same order or more than the treatment of a severely malnourished child with therapeutic products. This is because the other interventions are aimed broadly and many are given the intervention in order to treat one life-threatening event, whereas with treatment of severe malnutrition the intervention is focused (targeted) at the very vulnerable who have a high risk of death without intervention. Also, compared to HIV treatment, therapeutic feeding bears a relatively trivial cost! Why should the biggest killer of children - malnutrition - be 'saddled' with sustainability arguments when the HIV/AIDS antiretroviral treatment (completely unsustainable) is being rolled out over the whole of Africa?

3) More than half of all deaths have malnutrition as the underlying cause (they would not have died if they were not malnourished). Can we afford not to treat such a condition? The challenge is to extend the treatment to all that need it, and here cost really does become a factor. Particularly when we start to extend treatment to the moderately malnourished (as a programme, this is much more expensive and less sustainable) and then to the convalescent - as is happening in Niger at the moment.

4) UNICEF has made the commitment to support these therapeutic programmes with therapeutic products. This, of course, needs a major commitment on their part and I have no doubt that the commitment is real and the intention is to sustain support for this type of activity.

5) There is no reason why therapeutic products, such as F75, Resomal and F100, could not be produced locally with quality control, etc., in many countries – similar to the local RUTF manufacture.

6) We now have a 'gold standard' in F75 and F100 that not only produce good rates of weight gain, but also return the children to physiological normality. The treatment of the very ill malnourished patient during the first few days of treatment will probably remain with commercially produced F75 for the foreseeable future. Relatively small amounts are needed for this (about one kilo per patient) as most patients can be started directly in phase 2 (up to 80% of those that are anthropometrically severely malnourished). With such small amounts, it is far more efficient to purchase the commercial product.

Having a gold standard formula for F100/RUTF, on the other hand, now allows us to start to develop other foods and recipes - from local ingredients - that have the same nutritional and therapeutic properties and will allow the widespread sustainable treatment of far large numbers of children than can be treated at the moment.

I would suggest that we should START with commercial products. Where these are not available or where there is a rupture in the supply pipeline, we have alternative recipes that can be used - with the caveat that they will need extra staff, support, supervision, quality control, training etc, when they are used - and the staff will have to be of a much higher calibre. In the meantime, there has to be a research effort to emulate the results with various blends of local foods. But we should not compromise on quality of care and accept an inferior treatment just to make a programme, which is already cost effective in relative terms, cheaper (at the cost of lives).

Final few words

It is critical to remember that these commercially based therapeutic diets are not magic bullets that can be simply given without strict training on, and adherence to, the full protocol for managing severe malnutrition. In one of our analyses, we found a lower mortality with the old home-prepared high-energy-milk than with F75/F100. At first this was puzzling. But it became clear that the metabolic changes that occur with the modern diets are very rapid and can result in dysequlibrium syndromes, so that the children are even more vulnerable to therapeutic mistakes, certainly in terms of electrolytes.

I think we should emphasise that these are THERAPEUTIC products (i.e. they are medicines), that they are quite different from milks or infant formula, which are not available to the general public and are not advertised per se. Although a lot of people do know about them, these are mainly technical people so the production is DEMAND driven rather than advertisement driven, and the products are not replacing any natural process (such a breastfeeding).

We are in the middle of a nutritional revolution - let us be at the forefront of thinking and advocacy and not shoot ourselves in the foot by negative sustainability considerations - if it is needed, it is needed. We need advocacy for funds, implementation and research and we need to all be pulling in the same direction for the sake of the children.

Cheers
Prof Mike Golden

Note from a colleague

Dear Rebecca,

I read with interest Mike's perspective/experiences on the issue of use of the therapeutic milks and RUTF in treatment of severely malnourished children. The issues he describes are those we've experienced in the field. We make a big point of describing the therapeutic milks as 'medicine', not food, and insist that they be used as such.

What I have a real problem with is the increasing adoption of RUTF as a substitute 'food' to treat children whose diets are poor (and thus probably a major contributing factor to undernutrition). Isn't the 'right to food' that is familiar and nutritionally and culturally acceptable (i.e. real food, not formulations that carry macro- and micro-nutrients) a basic human right? It seems to me that the move in the direction of making formulations like Plumpy'nut widely available to 'all children who need it' puts energy into a strategy that perhaps provides an easier 'technical' solution, but one that must ultimately be less satisfactory to populations who should be able (like others) to raise their children on real, nutritionally adequate, food. The solution sidesteps the real problem, in my view.

Regards,
Mary Lung'aho
CARE USA

Responses from Prof Ann Ashworth Hill and Prof David Sanders home in on the issue of sustainability.

Dear Rebecca,

Nutriset F75 and F100 are certainly easier to use than 'homemade' (as you just tip out the packet and add 2 litres of water). It reconstitutes well, so there is no worrying about oil separating out. Also, all the electrolytes and micronutrients are included, so there is no worry about organising supplies of electrolyte/mineral mix or CMV.

BUT sustainability is a big issue. Take Tanzania for example. They were making 'home-made' versions with fresh cows milk and adding sugar, oil and CMV. After the WHO/UNICEF training in Sept 2006, the MoH/Paediatric Association of Tanzania arranged for the UNICEF country office to supply Nutriset F75 and F100. In April we found a lot of wastage as the nurses would make up 2 litres, even though they only needed 500ml, for example. (This can be avoided by weighing out/measuring appropriate amounts for 500ml, 1000ml, etc.). But there is no continuity of supply and they have run out. So they reverted to the homemade system, only to find that they have to start organising CMV or electrolyte mineral mix once again, and the system creaks and groans and they lose momentum (and even the skill of making the home-made version). Continuity of supply could well be improved by earlier, timelier reordering by the pharmacy - they did leave it rather late to reorder.

Take Queen Elizabeth Hospital, Blantyre (Malawi) as another example. They used to make their own therapeutic milk. Then when they had 'emergency' status, they switched from homemade to Nutriset F75 and F100, as it came free and was easier. But when the emergency status ended, the MoH was in a quandary. They could not afford to buy F100. When I was there, the MoH was thinking of buying Nutriset F75 in the relatively small quantities that it is used, but they were stuck about what to do regarding the F100.

TdH provides DSM and CMV. If the hospital has good dietary scales and a blender, then it is easy to reconstitute. It will cost less than Nutriset milks but will be very similar in composition. The Nutriset milks have lower osmolarity as they use dextrimaltose instead of sugar, but otherwise they will be virtually the same.

I would support TdH's current practice. If it works, then there is no point of changing to a system that would be more expensive and might be precarious.

Best regards
Ann

Dear Rebecca,
My feeling is one of great caution. I think that it is much more sustainable to rely on available products such as dried skim milk than on imported expensive items. I do not think that Nutriset products will be sustainable. If you are interested in an analogy, read 'Questioning the Solution,' a book David Werner and I wrote about Oral Rehdration Salts (ORS) sachets for diarrhoea - also not sustainable. There is evidence that those countries that have promoted safe rehydration fluids made up from locally available items e.g. sugar and salt or cereal-based fluids, are better able to sustain widespread and life-saving management of dehydration, because of interruptions in supply of sachets as a result often of unaffordability or delivery problems.

In my opinion it is, unfortunately, false to extrapolate from the emergency situation to the 'normal' country situation. Availability of commodities, precise conduct of procedures, and indeed outcomes in severe malnutrition are generally very good in emergency situations where special infrastructure and, more importantly, good staff ratios and committed (often expatriate) staff are present. Ironically, for populations living in 'non-emergency' situations in many African countries, the situation is often not nearly so good. There are shortages of equipment, drugs and staff, who are often inadequately trained, poorly paid and supported and, understandably, demoralised. This situation will only be corrected by major reforms (including economic policies) that ensure sustained improvements in funding, increases in staff numbers and competence, and improved support and supervision. Until such time, my view is that it is more responsible to base interventions on what is safe, effective AND more likely to be obtainable in the country. For, sadly, the comparison will often not be between made-up F75 and Nutriset, but in reality between made-up F75 and nothing.

Best regards,
David Sanders

Dear Editor,

In Field Exchange 30, Van Herp and others discussed the utility of using Mid Upper Arm Circumference (MUAC) as an assessment tool[1]. Unfortunately, this article makes the common mistake of treating weight-for-height (W/H) as a 'gold-standard' indicator of nutritional status.

The terms nutritional status and anthropometric status are often used interchangeably. Nutritional status refers to the internal state of an individual as it relates to the availability and utilisation of nutrients at the cellular level. This state cannot be observed directly so observable indicators are used instead. There is a range of observable indicators (biochemical, clinical, and anthropometric) of nutritional status, none of which taken alone or in combination are capable of providing a full picture of an individual's nutritional status. There is, therefore, no 'gold-standard' indicator of nutritional status.

Nutritional status can be usefully defined at the individual, as opposed to the cellular, level as the ratio of nutrient reserves (muscle and fat) to the nutrient requirements of organs (brain, liver, heart, kidneys, lungs, &c.). It is generally recognised that muscle plays a special role as a nutrient reserve during infection and that infection is a major etiological factor in acute undernutrition. W/H expresses the relationship between weight and height. In children, about 4% of weight is nutrient reserves in muscle. About 96% of weight is, therefore, unrelated to nutrient reserves. Height is almost completely unrelated to the nutrient requirements of organs. MUAC, however, is directly related to muscle mass and is, therefore, a direct measure of nutrient reserves.

The limited evidence that is currently available suggests that an index known as the lean-mass ratio (LMR), the ratio of the estimated mass of the limbs to the estimated mass of the trunk, is the best anthropometric indicator of nutritional status. LMR is, however, impractical to collect routinely in developmental and emergency settings. Investigation of the association between LMR and the various anthropometric indicators that are practical to collect in developmental and emergency settings suggests that MUAC, uncorrected for age or height, is a better indicator of nutritional status than all other practical indicators and that W/H is not associated with LMR and is the worst practical indicator of nutritional status.

An alternative to examining the association between different anthropometric indicators of nutritional status is to examine and compare the prognostic value (i.e. of predicting death) of the indicators. When this has been done, W/H has been consistently shown to be least effective predictor of mortality and that MUAC is superior to height-for-age and weight-for-age which are both superior to W/H. There is consistent evidence that correcting MUAC for height does not improve its prognostic value.

In terms of indicators that are practical to collect in developmental and emergency settings, uncorrected MUAC has the best claim to being a practicable 'gold-standard' of nutritional status. It is also better than competing indicators in terms of age-independence, precision, accuracy, sensitivity, and specificity. It is also simple, cheap, and acceptable to children and their carers.

The discrepancies between prevalence estimates obtained using W/H and MUAC case-definitions reported by Van Herp and others in Field Exchange 30 have been the subject of study. The currently available evidence suggests that W/H is strongly biased by body shape and, in populations with low sitting height to standing height ratios, its use leads to considerable overestimation (c. 800%) of prevalence in older / taller children. This is consistent with the findings presented by Van Herp and others in Field Exchange 30.

There is now a general acceptance of MUAC as the most useful case definition for entry into therapeutic feeding programmes and MUAC based case definitions are gradually replacing W/H based case-definitions for entry into supplementary feeding programmes (e.g. the national Extended Outreach Strategy (EOS) programme in Ethiopia now uses a MUAC

Dear Field Exchange,

When we think about Infant Feeding in Emergencies (IFE), it's generally associated with some crisis in a developing country; a tornado, earthquake, tsunami or conflict induced displacement. The UK shouldn't really need to give much consideration to international guidance on IFE, because things like this just don't happen in the UK.

So when I heard, following the recent UK floods, that in South Yorkshire alone, 14,000 people had been evacuated from their homes and that 86,000 homes had disrupted power supplies with 32,000 homes being completely without power, I wondered what systems, if any, were in place to protect vulnerable babies in the UK. In emergencies, children under five are more likely to become ill and die from malnutrition and disease than anyone else. In general, the younger they are, the more vulnerable they are. Inappropriate feeding increases their risks[1]. Are UK infants immune to this risk?

The WHO/UNICEF Global Strategy on Infant and Young Child Feeding (2003) describes how artificially fed infants *already* constitute a risk group and *should receive special attention from the health and social welfare system*. Therefore, situations like this really highlight the importance of breastfeeding. In emergency shelters or homes without power supply, how easy is it to maintain safety guidelines set out by the UK Food Standards Agency, Department of Health and infant formula manufacturers for preparing infant formula, i.e. mixing powdered formula with water at 70 degrees centigrade (the temperature necessary to kill harmful pathogens) and cleaning and sterilising bottles and teats. A recent report in the UK Guardian newspaper highlighted the *acute risks that formula feeding presents to infants where there aren't the resources to safely support it*[2]. Whilst we clearly don't have the same problems as in developing countries, the current situation across South Yorkshire and other areas of the country shows that there are occasionally problems to be overcome[3].

In a BBC Radio Sheffield interview, one man described how he was woken in the middle of the night by emergency crews who told him he and his family had 5 minutes to get ready and leave their home. For a breastfeeding mother, so long as the mother and baby are kept together, the baby's food needs are pretty much catered for. But for those mothers artificially feeding, how must they have felt to have to leave their homes so suddenly without any necessary equipment or means to feed their infant

If local authorities and other agencies are donating supplies of food that includes infant formula milk, are they following the UK Law, WHO and UNICEF code and resolutions Operational Guidance on IFE[4] and International Baby Food Action Network (IBFAN)[5] guidelines in ensuring breastfeeding is protected and not undermined by emergency relief efforts and distribution of breastmilk substitutes? Are those aid workers / staff aware that such guidelines even exist? Any appeals being made on behalf of victims should be for money rather than donations. Many health workers and parents are unaware that infant formula is not a sterile product to start with.

Is this covered as part of the 'major incident' preparations? Is the importance of keeping a mother and her infant together understood and training given in assisting mothers with relactation, if necessary? Are health workers and agency staff equipped to advise breastfeeding mothers whose infants are around six months of age, to manage mothers in a stressful situation, and to advise on cup feeding?

In many flood-affected areas, people have been left without mains supply water, drinking water supply or any bowser (portable container) water, and bottled water is the only option. In one UK county, 340,000 people lost their water supply. Many types of bottled waters (mineral, spring and table) may be unsuitable to mix with powdered feeds because the solute levels (sodium, nitrate, sulphate and fluoride) are too high to feed babies with. Have mothers, who normally use powdered formula, been informed that the ready to feed cartons of infant formula may pose less of a risk than powdered feed during this time, particularly where the clean water supply has been affected and has she been helped with supplies?

If it is felt that the that Infant Feeding in Emergencies guidelines are not that relevant in this country, then it really is time to think again. My feeling is that this highlights just how important it is in the UK, as well as the rest of the world, and I would urge the UK Government and other agencies to ensure systems are in place to protect this vulnerable group at such a difficult time.

My real concern is for those people in disadvantaged groups who are already experiencing inequalities in health. They are likely to be

based case-definition to target supplementary rations). The issue of indicator choice for use in surveys intending to estimate the prevalence of acute undernutrition in developmental and emergency settings is not whether MUAC should be used in addition to W/H (since it is now necessary to use MUAC in order to assess need) but whether the use of W/H is useful. The available data suggests that surveys intending to estimate the prevalence of acute undernutrition in developmental and emergency settings could reasonably abandon the use of W/H and use MUAC (and oedema) alone. Such a change would reduce survey costs and allow the use of more informative survey methods (e.g. methods that allowed the mapping of prevalence) at little or no extra cost. Data management and data analysis would be greatly simplified. The unification of definitions of prevalence and need would also simply data-management and data analysis and eliminate the confusion caused by the use of different case definitions.

Mark Myatt
University College London

[1] Field Exchange 30. Van Herp et al. Can height-adjusted cut-offs improve MUAC's utility as an assessment tool? p23-p26

the most affected in these circumstances as they are more likely to have health problems, have lower incomes (ready-to-feed cartons of formula are usually more expensive than powdered formula), less likely to be able to afford house insurance (to replace any damaged items such as sterilisers, bottles and teats), and may be less likely to have their own transport to collect water from depots.

Yours sincerely,
Sarah Saunby
Sheffield Area Contact, Baby Milk Action & BfN Registered Breastfeeding Supporter
UK

A more detailed version of this letter has been posted online, along with other details and information on infant feeding issues in the UK, at http://boycottnestle.blogspot.com/2007_07_01_archive.html

[1] http://www.ennonline.net/pool/files/ife/module1-manual.pdf
Infant Feeding in Emergencies, Module 1 for emergency relief staff WHO, UNICEF, LINKAGES, IBFAN, ENN, 2001
[2] http://www.guardian.co.uk/comment/story/0,,2090780,00.html
The Guardian Formula milk is even more deadly in disaster zones, by Marie McGrath, Wednesday May 30th, 2007
[3] http://news.bbc.co.uk/1/hi/uk/6239828.stm
BBC News Floods force thousands from homes. Tuesday, 26 June 2007
[4] Operational Guidance on Infant and Young Child Feeding in Emergencies, v2.1, Feb 2007. Applies worldwide. Available at www.ennonline.net/ife
[5] IBFAN is a global network to strengthen independent, transparent and effective controls on the marketing of the baby feeding industry. The UK IBFAN organization is Baby Milk Action, http://www.babymilkaction.org

Abebe and Tebewebch Kebret are seed multipliers in the Berta Development Centre district of Bora, Ethiopia.

D Stephenson/Self Help Development Intl, 2006

Grassroots seed multiplication in Ethiopia

By George Jacob

George Jacob is communications officer with the Irish agency, Self Help Development International.

The author would like to thank Dr. Awol Mela, Africa Director, Self Help Development International; Shimikat Maru, Co-Operative and Capacity Development Officer, Self Help Development International, Butajera, Ethiopia; and Teshale Jemal, Communications and Planning Officer, Self Help Development International, Addis Ababa, Ethiopia.

Providing access for subsistence farmers to good quality seed stock presents enormous challenges to organisations involved in developing robust food and livelihood security systems amongst the rural poor in countries across Sub-Saharan Africa. Self Help Development International (Self Help) working in Ethiopia have embarked over the past three years on an innovative capacity building programme in seed development and distribution, which has already succeeded in strengthening existing local seed supply.

More than a decade ago, the government in Ethiopia put into place a National Seed Industry policy to attempt to bring about improvements in seed distribution for agricultural production. Considerable advancements have been made in the development of high quality seeds, in streamlining of evaluation systems, and regulation of seed quality standards. However, agencies such as the state run Ethiopian Seed Enterprise (ESE) have been unable to meet the demand that exists for quality seed – of cereals, in particular. As a result, it is estimated that up to 80 per cent of rural farmers in the country rely on the 'non formal' sector for their supplies, with small-holders using their own seeds saved from previous crops, or obtaining stock from neighbours, often in exchange for grains or other commodities. Although the country's agricultural research system has developed and released nearly 400 varieties of 50 different crops in recent years, the ESE has only been able to produce 80 different seeds of just 20 different crop varieties.

Self Help Initiative

To overcome this supply problem, Self Help and its Ethiopian team have worked in partnership with the country's Co-Operative Development Bureau and Agricultural Research Institutes to develop, at grassroots level, a system whereby local farmers and farmer groups are supported with the development of a grassroots seed multiplication programme. This enables them to produce and market their own high yielding drought resistant varieties for sale and distribution to farmers across wide areas of Ethiopia's populous Oromia region.

The objective is to provide a sustainable supply of improved seeds to all programme

Members of the Fusa village cereal seed multipliers with Self Help in Ethiopia

D Stephenson/Self Help Development Intl, 2006

areas. In order to achieve this, Self Help has supported the creation of seven primary seed co-operatives through three existing co-operative unions, which it has been involved in developing, to provide inputs and marketing support to farmers in the Sidama Elto, Walta and Melik regions of Oromia.

Across the seven co-operative groups, more than 350 individual farmers have become involved in seed production of improved quality varieties of wheat, teff, haricot bean and soy-bean, amongst the major crops that are traditionally produced by small scale farmers across the region.

To get the initiative underway, Self Help embarked upon a programme of familiarisation and technical training amongst its participating seed producers, and supported all of the farmer producers with seed production management, post harvest handling, and co-operative management and leadership training. The organisation purchased basic seed of selected crops from the ESE, and supplied this to its multiplier co-ops in order to rear and have ready in time for the new planting season.

It was critical from the outset that the timing was right and to ensure that good quality seed stock was available to the farmers when they needed it. Otherwise this would have destroyed farmer confidence in this enterprise and they would have found some alternative local source, and gone back to the low yielding varieties that they had traditionally used.

Cost share

Through the Self Help supported co-operative unions at Sidama Elto, Walta and Melik, the improved quality seed was provided along with other necessary inputs to several thousand farmers on a credit basis – with 25% of the cost being paid up-front upon delivery of the inputs, and the balance being paid after harvest in the first year of the project – 2005. During the second year of the initiative in 2006, the repayment schedule was organised on a 50:50 repayment schedule, and in the current year, the farmers who have been involved in the programme from the outset are paid the full-cost of the better quality seeds at the time of delivery.

Other infrastructure supports were also provided, with Self Help supporting each of the co-op unions with the construction of warehousing and seed cleaning equipment, to ensure that quality was maintained and spoilage of the stock kept to a minimum. The initiative has been one of partnership from the very outset, and the support and backing of the local communities, the unions, the Ministry of Agriculture, the Co-Operative Development Bureau, the ESE, and of the Agricultural Research Institutes have been vital to the success to date.

The challenges faced/Lessons learned

The venture has of course faced several challenges – a number of which still have to be overcome.

First, there is a perception amongst potential local buyers that the quality of stock that is being produced by their Self Help farmer multipliers is not of the same high grade as that available from the country's seed enterprises and research centres. Seed that is bought from the seed enterprises is clean and is well presented because it has been separated by mechanical threshers, has been properly cleaned with machinery, and comes in pre-packed bags. Self Help's multiplier farmers are still threshing with oxen however, and the sacks from which seed is sold can therefore also contain damaged seeds, as well as beards and husks, because it has not been cleaned in the same mechanical way. Local farmers sometimes judge the stock by its appearance, regard it as inferior to that supplied through the seed enterprises, and are therefore unwilling to pay the prices being sought by the farmer producers. As a result of this, the producers have been forced to accept a lower price – and will continue to have to do so until they have improved their marketing and presentation, and built confidence that their farmer produced seed will deliver the higher yields that they promise.

There have also been challenges with the marketing of surplus seed outside the immediate locality. Again it is a question of confidence in the product – which will be difficult to overcome until the quality of presentation of their seed stock has been improved.

Steps are currently being taken to strengthen links between the Self Help producers and the agricultural research station advisors, so that the issue of presentation can be tackled as a priority, and so that the mechanisms are in place to provide seed multipliers with the technical back-up that they will need to ensure the long term sustainability of their activities.

Latest recruits

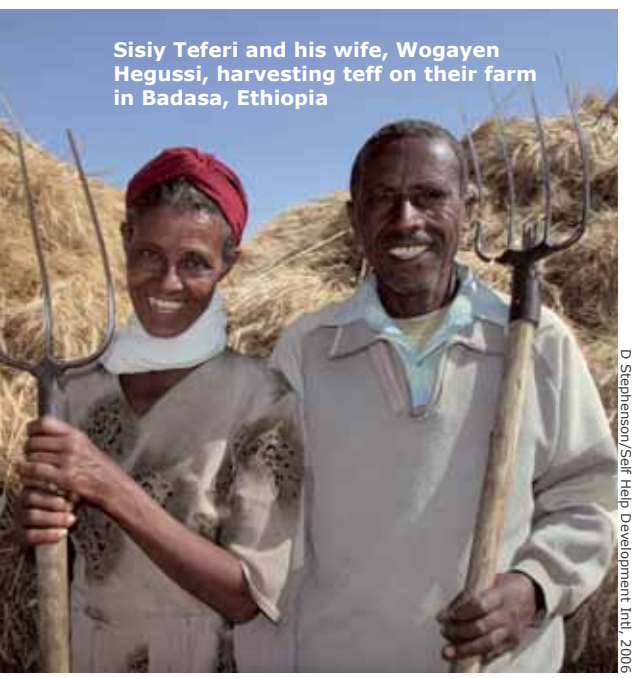
Twenty-five farmers of the Fursa Farmers Co-Operative in the Huruta area are amongst the newest seed multipliers to become involved in the Self Help initiative, having agreed to take part after visiting the programme during a Farmers Field Day that was hosted by the agency, in Spring 2006.

Sixteen members of the group set aside five hectares of land to multiply seed stock for the early maturing and high yielding CR Cert 7 variety of Ethiopia's teff grain – used to produce the country's traditional pancake-like injera bread. When they harvested for the first time last Autumn, they estimated that they had produced enough stock to meet the needs of up to 2,000 farmers in the locality, this year. Participating farmers were pleased not just at the wider impact that their activity is having – for they know that they also have a highly profitable and marketable commodity in it's own right. In the past when farmers sold grain for consumption, they received approximately 220 Ethiopian birr (€18) per quintal in the local market, but with the seed stock that they now have they intend to charge 300 birr (€25).

This year the number of farmers involved in teff and wheat multiplication in Hurutu has increased to 50 farmers, with all of the farmers being organized into a local farmers seed multiplication co-operative, so that they have the necessary structures to ensure long term sustainability, and profitability of their enterprise.

For more information, contact George Jacob, email: george.jacob@shdi.org

To find out more about the work of Self Help Development International visit http://www.selfhelp.ie



Sisiy Teferi and his wife, Wogayen Hegussi, harvesting teff on their farm in Badasa, Ethiopia

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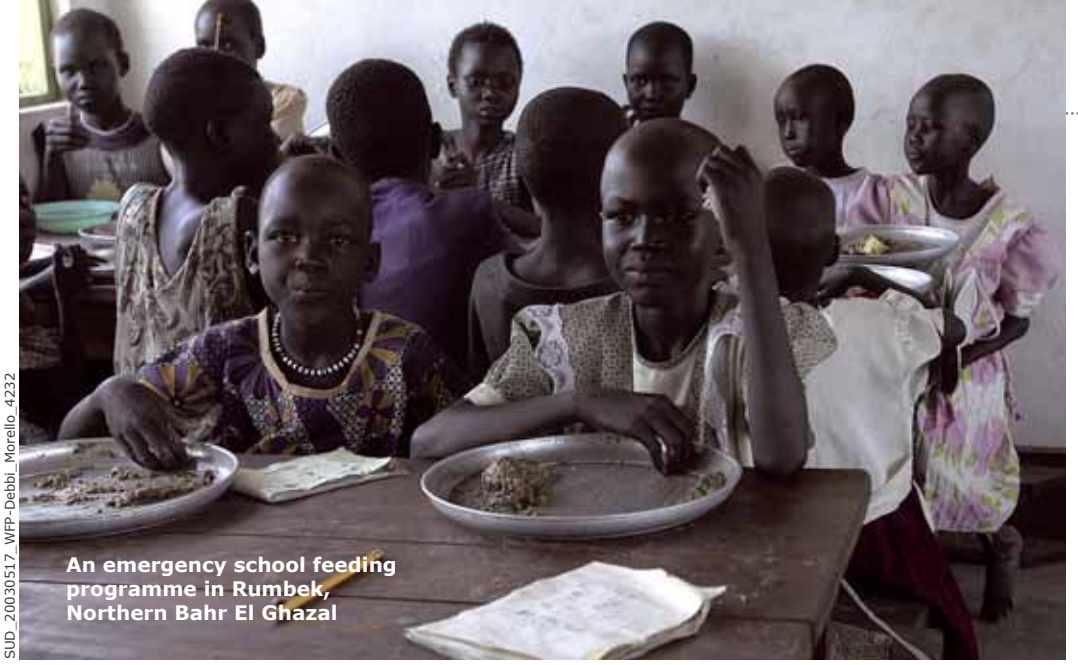
Harvesting teff

D Stephenson/Self Help Development Intl, 2006



SUD_20030517_WFP-Debbi_Morello_4232

An emergency school feeding programme in Rumbek, Northern Bahr El Ghazal

Emergency school feeding programmes

Summary of evaluation[1]

WFP have recently completed an evaluation of emergency school feeding programmes (ESF)[2]. The evaluation consisted of a desk study, three field visits to countries with ESF operations[2], an e-mail survey distributed to ESF project managers in country offices and an analysis, including a workshop to review and process the data.

The main findings of the evaluation were as follows;
In most of the projects studied, ESF objectives were not fully consistent with needs of beneficiaries. Project documents, at times, referred to 'standard' objectives, such as reduction of gender disparities and the increase of primary school attendance, or set broad objectives to cover a variety of school feeding activities in a country-wide operation. Consequently, objectives did little to guide implementation. WFP field staff frequently did not follow them and sometimes formulated their own objectives that were more consistent with needs than the original ones. Cooperating partners were often not aware of the WFP objectives either and defined their own project objectives, for which they would merely seek, and usually receive, WFP support.

Stakeholders identified ESF aims other than WFP's objectives, ranging from nutritional goals such as 'helping to meet nutritional requirements', increasing food security at school or closing the food gap, to goals of psychosocial and physical protection. A frequently mentioned alternative objective was to facilitate a return to normality for children affected by an emergency.

In situations characterised by high food insecurity and malnutrition, WFP has to focus resources on the nutritional needs of the most vulnerable people. But some donors object that school feeding does not necessarily address such problems and may even compete for resources with programmes that aim to save lives.

Assessing the educational situation and identifying the main needs and constraints is a challenge in emergency contexts, exacerbating the difficulty of implementing ESF. Coupled with the lack of coherence between objectives and needs and the shortcomings in implementation at the school level, this has reduced the effectiveness of some ESF projects.

The evaluators argue that school feeding can be effective when nutritional improvements are a prerequisite for achieving educational objectives. Supporting education through school meals is a unique way of improving the quality of learning, by alleviating short-term hunger and reducing late morning absenteeism when children leave classes to find food. Unaffordable school fees, however, can cause low enrolment and attendance, as well as inaccessibility of schools or discrimination against certain groups. Work to improve enrolment and attendance needs to be based on an understanding of such barriers in a given situation, not all of them can be addressed by school feeding, and some require specific action.

The type of modality is particularly important in volatile, impoverished or resource-poor emergency or recovery contexts in terms of, for example, food preparation times, the relative and perceived value of the food, support for and supervision of food preparation and the requirements for additional inputs and infrastructure. To prepare daily meals, schools need kitchens or cooking facilities, storage to protect food from misappropriation and spoilage, and water for cooking and cleaning. Under-resourced schools cannot provide these inputs and are therefore excluded from the programme or have difficulties preparing the meals. Communities also have to provide resources and parents are often called on to contribute food or non-food items. Many poorer schools struggle to provide these inputs and are therefore at a disadvantage. Depending on the objectives, less demanding modalities, such as biscuits or take-home rations, may be alternatives.

The choice of food and implementation modalities in relation to project objectives and the target population is, therefore, a strategic one. Current guidance on modality selection does not provide the context-specific information or selection criteria to enable WFP staff to design optimum interventions for emergency situations.

School feeding programmes require sanitation, water, and hygienic cooking and storage facilities. In communities where these conditions do not exist, WFP needs to work with partners such as UNICEF to provide the necessary infrastructure. The challenge is to ensure that schools that could benefit from assistance are not excluded from the programme because they do not meet minimum conditions.

Targeting criteria and processes need to take account of needs and resources. This is currently limited because educational indicators have a minor role in geographical targeting and school selection, and needs assessments do not identify the areas of greatest need where school feeding might be most effective.

WFP also has to link targeting to the logistics challenges and delivery costs. If this is not done, the most vulnerable schools may not receive food because unforeseen logistics problems raise the cost of delivery to remote locations above the budget limit. More flexibility is needed in adjusting this limit to meet the conditions of the emergency.

WFP may have to choose between allowing more effective implementation in the short-term or taking a longer-term perspective and building the capacity of the government. Where WFP uses ESF as a tool for linking relief, recovery and development, field staff must be sensitised and empowered to build capacity or increase community involvement without requiring quantitative performance targets.

Conclusions

The evaluation concludes that the challenge for WFP is to develop responses for each context rather than an overarching approach for ESF. Approaches developed by WFP programmes – for example, providing rations for mothers to prepare meals, as in the DRC, or providing financial and logistic training for new education authorities as in the Sudan, can inform more context specific EFS programme design in the future. Also, ESF assistance does not always reach the schools that would benefit from it most, primarily because WFP is not using opportunities for context-specific design of ESF for particular contexts. The organisational causes of this design weakness are the lack of context-specific expertise, guidance and tools to implement ESF and the prevailing culture of decentralised decision-making in WFP. The standard tools and procedures are either not specific enough or fail to reflect the educational rationale of ESF projects. A significant gap is limited availability of staff that understand the strengths, weaknesses and challenges of each ESF modality.

Two factors that reduce the effectiveness of ESF projects are imprecise targeting and lack of complementary inputs. Improvements in needs assessment and more precise targeting may make coordination with other educational and nutrition /health activities more difficult. Increased coordination with UN and NGOs involving adoption of their criteria carries the risk that WFP's targeting principles may be compromised, for example, nutritional consider-

[1] Executive Board Annual Session, Rome 4-8th June 2007. Evaluation report 7, Agenda item 7. Summary report of thematic evaluation of school feeding in emergency situations. WFP/EBA/2007/7-A. April 27th 2007.
[2] Pakistan, Sudan and Democratic Republic of the Congo

ations might be left out of the targeting process. Improvements are needed in both areas - WFP has to find a balance between increasing the accuracy of its targeting and improving coordination with its partners.

The evaluation set out a number of recommendations including;

- WFP should introduce requirements for country specific implementation plans to support ESF programming.
- WFP programme designers should develop objectives that respond to results of local assessments inclusive of educational needs.
- The targeting process should ensure that WFP could reach schools in the most food insecure and vulnerable areas.
- Modalities and minimum standards should be chosen in relation to objectives and the context, with attention to the risk of excluding the most vulnerable.
- ESF can be made more effective if accompa nied by complementary activities. WFP should have a strategy to ensure there are provided, considering in part the potential of strategic partnerships.
- WFP should recognise the potential of nutritional benefits of ESF and optimise it where severe food insecurity and malnutrition amongst school children is hampering learning.
- WFP should design training tools for ESF and plan expertise to improve use of technical guidance in design and implementation of ESF in the field.

Women displaced by floods wait to receive food rations at Chupanga camp, near Caia in Sofala Province.

UNICEF/HQ07-0113/Thierry Delvigne Jean, Mozambique

Evaluation of cluster approach in Mozambique

Summary of evaluation[1]

A real time evaluation (RTE) of the response to the Zambezi river floods and Cyclone Favio in February 2007 makes interesting reading. The RTE was commissioned by a group of Inter Agency Standing Committee (IASC) agencies. The evaluation focussed on five critical areas:

- The use of the IASC cluster approach[2] in Mozambique
- Emergency funding mechanisms including the Central Emergency Response Fund (CERF)[3] and flash appeal
- Connectedness of the response with the longer term context
- The extent to which the needs of the affected population were met
- Support for local institutions.

The main findings of the evaluation were as follows;

The relief response was a success and although the operation was not perfect, there was no widespread suffering or avoidable deaths. Main reasons for the success were effective preparedness and coordination by government and the impact of humanitarian reforms, such as the cluster approach and the CERF.

The floods and cyclone in Mozambique were a relatively small emergency. This simplified the response. The introduction of the cluster approach was uneven but it did add to the quality of the response. Those who had also experienced the 2001 floods commented that coordination among the international humanitarian community was far better in the 2007 response.

The early deployment of an Office for Coordination of Humanitarian Affairs (OCHA) staff member from the Humanitarian Reform Support Unit helped to get the cluster system and the CERF application up and off the ground quickly. However, OCHA did not deploy a large enough team to properly support the roll out of the cluster system in Mozambique.

Cluster coordination is different from normal sectoral coordination. In normal sectoral coordination, agencies coordinate over the areas where their agencies' work overlaps, while each keeping their individual agency objectives. With clusters, the focus is not just on removing gaps and preventing duplication, but also on jointly moving towards commonly agreed cluster objectives. The cluster lead role, therefore, demands both participatory leadership and a broad presence in the field. Some clusters achieved this and others did not.

At the start of the response, non-governmental organisation (NGO) participation was threatened by press releases and situations reports that minimised their role, directive rather than participative management by cluster leads, and a lack of transparency in dealing with applications for CERF funding.

Not all cluster leads had a presence in the field, limiting their ability to capture information from the field level or to support coordinated action.

Overall the cluster approach was a success in Mozambique. It encouraged a cooperative ethos between agencies that led to a better quality and more effective response.

The CERF helped to ensure a rapid response, and a larger programme of assistance than would otherwise have been possible. The poor support for both the International Federation of the Red Cross (IFRC) appeal and the Flash Appeal suggests that without the CERF, relief funds would have been significantly less, especially in the first month of the response. However, agencies need to be better prepared so that they can prepare their CERF request faster.

Because of the time pressure, the CERF secretariat cannot vet applications for funding except in the most rudimentary way. Some clusters thoroughly discussed CERF applications before submitting them while others did not. Some of the activities funded seem much more appropriate than others and some control is needed to ensure that applications for CERF funds are of a higher quality than Consolidated Appeals have been in the past.

Growing local capacity is a key disaster preparedness measure. The strong performance of the Mozambican Red Cross in the response showed this. The CERF needs a mechanism to nurture such capacity during an emergency response.

Some aspects of the response in Mozambique represented the ideal of what a response in a developing country should be. In particular, and despite some constraints, the National Institution for Disaster Management (INGC) behaved as the very model of an ideal National Disaster Management Institute. The strong national coordination also helped with coordination of the international humanitarian response. Strong national coordination and good international coordination supported each other.

The RTE contained many recommendations that were categorised under three headings; IASC, HCT and other. These included:

- The IASC should develop a checklist for the country team to use when considering which agencies should lead clusters
- Members of the HCT should continue and deepen their support to INGC OCHA should quickly deploy teams to support cluster roll-out in other emergencies, supported by sufficient staff in-country for information management and a field presence to support inter-cluster coordination.

For more information on the Cluster Approach and the Nutrition Cluster, see news piece in this issue of Field Exchange.

[1] Inter-agency real-time evaluation of response to February 2007 floods and cyclones in Mozambique. Cosgrave. J et al, May 2007. Draft final version presented at IASC Working Group meeting 12th-15th June, 2007.

[2] See news piece on the cluster approach in this issue of Field Exchange.

[3] The Central Emergency Response Fund (CERF) is a stand-by fund established by the United Nations to enable more timely and reliable humanitarian assistance to those affected by natural disasters and armed conflicts. More information available at http://ochaonline.un.org/cerf/CERFHome/tabid/1705/Default.aspx

A typical back garden in the IDP camps

E Tansey/MI, Sudan, 2006

Household-based food fortification for anaemia control in Sudan

By Erin Tansey and Dr. Ibrahim Bani

Erin Tansey started work as a programme officer for CARE in Bosnia in 1996. She moved on to work for UNHCR in Asia and Africa and has been a Technical Advisor for Emergencies for The Micronutrient Initiative in Johannesburg since 2005.

Dr. Bani is a medical doctor with many years of experience working in the area of Public Health. He is a consultant to The Micronutrient Initiative (MI) and provided much of the technical inputs into this project.

The Micronutrient Initiative (MI) would like to thank the Christian Blind Mission International Canada (CBMI) for their financial support for this pilot project. MI would also like to thank the Sudanese Red Crescent and the Sudanese Ministry of Health (National Nutrition Directorate) for their invaluable contributions to this project.

This article draws on a report prepared for the Christian Blind Mission International Canada (CBMI) by MI.

Nearly two million internally displaced people (IDPs) and refugees in Darfur are entirely dependent on the World Food Programme (WFP) distributions of food aid in order to survive. Micronutrient deficiency is considered a major problem in Darfur. As well as contributing to infant mortality, over 50% of all children 6-59 months are estimated to suffer from anaemia, while vitamin A deficiency is estimated at 36%. Although food rations provide some micronutrients, they are reportedly not enough to meet the needs of the most vulnerable populations – pregnant and lactating women and children under 5 years of age (CDC/WFP Emergency Nutrition Assessment, Sept 2004).

The Micronutrient Initiative (MI), together with the Sudanese Red Crescent Society (SRCS) and the Sudan Ministry of Health National Nutrition Directorate (MOH-NDD), set out to implement a pilot project to test the acceptability to IDPs of low cost micronutrient premixes and the feasibility of using it to improve micronutrient status in a camp in Darfur. There were major constraints to food sources other than the WFP ration during the project time period. Most IDP families had moved off their land and were unable to return to harvest any foodstuffs. The area around the camps is very arid and most IDPs did not have access to gardening space. Prices of food on the local market were also steadily increasing, making it very difficult for IDPs to make any purchases.

The project timetable was a four month period (January – April 2006) and had three inter-related components:

- Sourcing, procurement, supply (to the camp) and local storage of an appropriate multi-micronutrient premix in quantities sufficient to meet the needs of the target population.
- Training of staff and distribution of the micronutrient premix to families.
- Monitoring and evaluation focused on acceptability and feasibility studies (to which an additional efficacy study was later added).

All the above were supported by technical assistance and project management from MI.

Sourcing micronutrient premix

The initial intent was to procure and deliver 2.1 million micronutrient sachets (Sprinkles™) to the specified camps in Sudan. However, as a result of the initial assessment and field visit, it became clear that due to the eating habits of the intended beneficiaries, the individual micronutrient sachets would not be appropriate. The eating culture/practice in Darfur is that a family eats from one single plate, with no individual bowls or plates for children. As such, individual sachets intended for children would have to be mixed into the single family pot, thereby diluting the content to such an extent that it would no longer benefit the child. MI decided it would be more appropriate to use a free-flowing micronutrient premix (Rahama) that would be added to the family pot and would benefit the entire family, not just children. The premix would be added to the sauce that accompanies the staple food (usually sorghum or wheat) and is added after cooking. The fortification would be carried out for a period of two months.

The free-flowing micronutrient premix, used by MI in its large school feeding projects in Asia, has been shown to be effective in reducing anaemia and iron deficiency in children under 5 years of age. A very similar premix composition was sourced for this project using three micronutrients (see table 1). This premix is also significantly less expensive than the individual sachets, mainly because there is no packaging for individual servings.

In practice, 500kg (25 bags of 20 kilograms each) of premix was produced in India, flown first to Khartoum and then to Nyala (air transport was used because of poor road conditions and security issues). An additional 100kg was later sourced to support an efficacy study (see next section). The premix was then distributed into individual family containers (10,000 plastic resealable containers were sourced in Sudan and transported to Darfur) by the SRCS and the MOH.

Efficacy study

As this was the first time that such a micronutrient premix was distributed in an emergency environment, an efficacy study was conducted by MI to review the impact on haemoglobin levels of women and children consuming the Rahama. Some 250 IDP families from the two camps were randomly selected and asked to take part in the study over a four month period. Baseline and post-intervention data were gathered from women and children (under 5 years) using a HemoCue[1] ® machine. A further 125 families in an IDP camp not receiving Rahama also took part in the study and were used as a control group.

Training

At the beginning of the project in January 2006, MI organised a two-day workshop for 65 people in Nyala for the SRCS and MOH staff and volunteers. MI considered the particular advantage of working with the SRCS was their network of volunteers who have worked throughout the country for over 20 years, who understood the local culture and speak the local language. Capacity building at community level would hopefully add to the sustainability of the project in the event of scaling up.

The workshop, conducted in Arabic, covered the basics about nutrition, including the importance of vitamins and minerals, especially

[1] The HemoCue® Hemoglobin Systems is a method for quantitative haemoglobin assessment in the field. Any blood source (capillary, venous or arterial) can be used. The unbreakable, disposable cuvette collects the exact amount of blood and mixes the sample with the reagents automatically. The cuvette is placed into the portable analyzer. Results appear on the display screen in less than a minute. It uses only 10 µL of blood. The machines can be used by non-laboratory personnel after a brief training session.

Table 1 Rahama content (with dextrose filler)

Nutrient	Micronutrient level per dose (0.25g) premix	% RNI* children 1-3 years	% RNI children 4-6 yrs	%RNI women of child-bearing age
Vitamin A (µg retinol equivalent)	150	38%	~40%	30%
Iron (mg)	14	100%	100%	25%
Folic Acid (µg)	50	33%	25%	10%

*Recommended nutrient intake

Table 2 Comparative data for the child group

Variable	Mean ± SD	P value
Child's weight (kg):		
Pre in tervention	13.4 ± 4.3	0.229
Post intervention	13.9 ± 2.5	
Child's height (cms):		
Pre intervention	92.2 ± 11.5	0.09
Post intervention	94.1 ± 12.4	
Child's haemoglobin level (g/dl):		0.01
Pre intervention	10.9 ± 1.8	
Post intervention	12.8 ± 4.2	

Table 3 Comparative data for the mother group

Variable	Mean ± SD	P value
Mother's weight (kgs):		
Pre intervention	50.9 ± 6.9	0.08
Post intervention	55.9 ± 8.9	
Mother height (cms):		
Pre intervention	155.5 ± 20	0.09
Post intervention	163.2 ± 6.3	
Mother's haemoglobin level (g/dl):		0.09
Pre intervention	11.9 ± 1.9	0.10
Post intervention	13.0 ± 1.6	

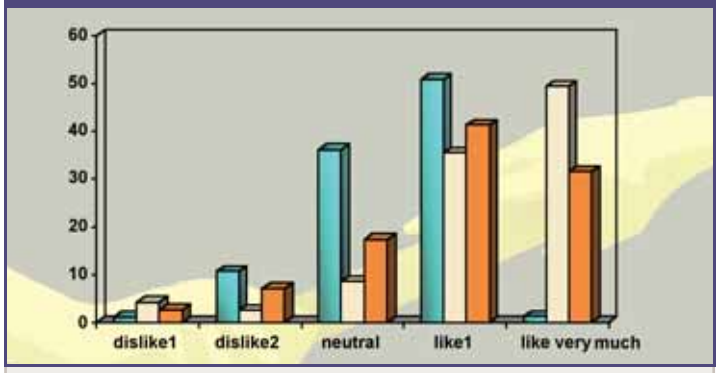
Table 4 Haemoglobin (Hb) levels in control group

Variable	Mean ± SD	P value
Women's Hb (g/dl):		
Pre intervention	12.5 ± 1.9	0.382
Post intervention	12.7 ± 1.5	
Child's Hb (g/dl):		
Pre intervention	10.3 ± 1.4	0.282
Post intervention	11.0 ± 1.5	

Vitamin A, folic acid and iron, and information on their food sources. It also informed staff of the proper use of the Rahama premix for prevention and treatment of nutritional anaemia and other micronutrient deficiencies. Staff were given training on how to conduct a survey and gather data and how to hold focus group discussions. The Federal MOH-NND provided some of the support for this training, along with MI.

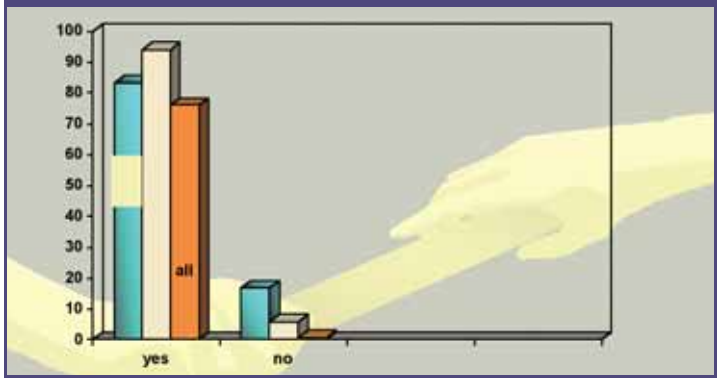
To support the efficacy study, 20 staff were given further training and undertook practice tests on how to use the HemoCue® machines, supervised by the MI technical consultant and the Federal MOH.

Graph 1 Overall acceptance of Rahama premix using Hedonic scale

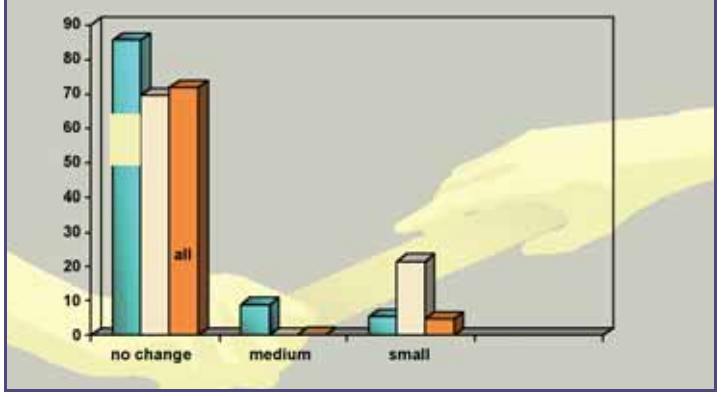


Note on Hedonic Scale: As part of the acceptability test, the Hedonic scale was used. The scale is part of a sensory evaluation of a food or other product, and is a subjective test. The method measures the level of the liking of foods, or any other product and relies on peoples ability to communicate their feelings of like or dislike. Hedonic testing is popular because it may be used with untrained people as well as those with experience. A minimum amount of verbal ability is necessary for reliable results (O Mahony, 1986).

Graph 2 Overall acceptance of Rahama premix



Graph 3 Rahama premix colour change



Distribution to Families

In the first month of the project (26 March to 25 April 2006), 3,975 containers of premix were delivered by SRCS volunteers to individual households in Derig and Serif camps. During the family-level distribution, mothers/caregivers were sensitised about the reasons for consuming Rahama and its proper use, storage, etc. Volunteers then made monitoring visits every two weeks to each family for the entire two month intervention period. A total of 32,000 people were reached, or 3,975 families (varying in size from 5-10 members), with 4,800 women of child-bearing age and 13,984 children under 5 years of age.

Twelve SRCS supervisors and eight State MOH staff continued to conduct monitoring of the cases that took part in the efficacy study, using Rahama for a total of six months after the initial blanket distribution of two months.

Findings

Acceptability Baseline Study and Evaluation

Through focus groups, an acceptability baseline study on the overall attitudes, knowledge of good nutrition and current eating habits was carried out by the SRCS staff in the camps (see graphs 1-3 for summary results). Also, an acceptability questionnaire was prepared by MI and incorporated into the bi-weekly household data gathered by SRC during their monitoring visits. Analysis was carried out by MOH Khartoum.

The overwhelming majority of IDPs questioned found the premix easy to use and store and that it did not change the colour or taste of the food. Over 90% of the people interviewed said that they "accepted" this new premix. Several mothers also commented that their children were generally healthier while taking this premix. Overall, 191 families (63 families from Serif camp and 128 families from Derig camp) refused to use the Rahama during the second month of distribution. This represents less than 1% of families, and is likely due to a misunderstanding of the intended benefits of the premix.

Efficacy Study

MI and its partners conducted a baseline survey before the first distribution of premix in March 2006 in three camps. Two camps were due to receive the premix (2000 subjects or 250 families) and one camp was not and used as a control group (Otash camp with 1000 subjects or 125 families). The families were chosen at random from a list of refugee families.

The beneficiaries participating in the efficacy study continued to use the premix on a daily basis for a further four months in addition to the two months. The post-intervention survey was conducted in early December 2006, a full month after the beneficiaries stopped using the premix, after roughly 210 days of premix consumption. MI had hoped to conduct the survey immediately after the final distribution of premix, but several religious holidays in Sudan during that time made this impossible. The post-intervention data were then transferred to the Federal MOH Statistician for data entry.

The data analysis shows that there was a statistically significant increase in haemoglobin levels of children under 5 years of age (table 2) and also an increase in the haemoglobin levels of women (table 3). In the control camp, it was only possible to collect data from 39 families (31.2%) (table 4). The response rate in the control group was low due to several reasons, including some families had moved away from the camp and could not be located, while others refused to participate in the end line survey, as they were not offered any incentives. This could be a source of bias in interpreting these results and a secondary analysis of the data, looking at the reasons for non-response, is currently under-way.

Technical assistance and project management

As a result of the project, the SRCS's overall capacity to carry out projects in the field was strengthened. Over 50 SRCS volunteers now have a solid understanding of the importance of nutrition, and of micronutrients in particular, in the overall health and well being of women and children. These volunteers have also gained knowledge and experience of conducting focus group discussions and other means of collecting information.

Much of the technical support was provided by an MI consultant who is a medical doctor and who is from Sudan, and speaks Arabic. He carried out the 2-day training, prepared all the questionnaires for data collection and all

the training material for the workshop. He provided much of the technical follow-up throughout the project and also acted as the liaison between MI and the Federal and State MOH.

MI's technical assistance/support also benefited both the Federal and State MOH, as they were part of the initial training on the use and importance of the Rahama, and on the use of the HemoCue® machines. This training has now increased the MOH's overall capacity to conduct nutritional surveys (as the HemoCue® machine is almost always used in nutritional surveys). Many nutritionists from the Federal MOH, who were not involved in this pilot project, took part in the final Lessons Learned workshop in Khartoum. In July 2006, once the acceptability study had been completed, a small 'Lessons Learned' workshop was also held in Nyala. Many nutritionists from the Federal MOH, who were not involved in this pilot project, took part in the final Lessons Learned workshop in Khartoum. This exercise brought up several useful suggestions that could be used for improving and scaling up this project or in future Rahama projects.

Issues and Lessons Learned

Improve Customs Clearance:
More attention must be paid to ensure the smooth passage through customs of premixes in order to ensure timely delivery. Staff need to work in advance with customs officials while, in the longer term, work may be needed to help amend customs clearance regulations to ease the import of micronutrient powders and premixes for food fortification.

Integrate premixes with the general food basket:
Once the premix cleared customs, a further delay occurred in transporting the premix to Nyala. In future, it will be important to advocate in advance for premixes and micronutrient powders to be considered as part of the general food basket, so that it can be transported using the existing transport systems. Using indigenous organisations like the SRCS, already involved in camp logistics, to distribute Rahama along with the general ration and to train and sensitise the population on the use and effectiveness of Rahama can greatly add to the sustainability of the project.

Select ferrous fumarate for use in areas with high temperature and humidity:
During the distribution of the premix into individual containers, black spots were found in the premix. After analysis, it was found that this was due to the fact that the chemical company used ferrous sulfate as the iron compound, which may show colour changes when exposed to excessive heat and humidity, despite good quality packaging. As this may affect acceptability, where supplies run the risk of exposure to extreme heat and humidity, orders for such supplies must specify the more stable (but more expensive) ferrous fumarate compound as the form of iron, as it is much less sensitive to heat and humidity.

Extend the expiry date of premixes to improve their utility in emergencies:
The standard expiry date on this product is 6 months. However, in order to maximise the value of this product in emergency settings, the shelf-life of the premix needs to be increased to a minimum of 12 months.

Intensify field level IEC and monitoring:
Briefing at the beginning of the project, as part of the process of obtaining the informed consent of families in the camps for participating in such an intervention, needs to be improved and intensified in future. In this instance, 191/3973 families in the blanket distribution refused to use the premix, as they did not really understand what it was for and wanted to know why it was "only" being given to the IDP population and not the local population. Five families (2% out of a total of 250 families taking part in the efficacy study) used their entire month's supply of premix in one week, as they used it in every meal, not just once a day. Although this did not result in any adverse effects on the health of any of those families, it demonstrated the need for more intensive information education and communication to ensure 100% correct use.

Costing:
The overall cost of this pilot project was roughly $150,000 Canadian dollars. However, much of this was spent on 'pilot' activities, such as the development of protocols, carrying out the acceptability study, etc. We estimate that the cost of distributing Rahama using an existing distribution system, would be less than $45,000 a year for 30,000 people, or less than $1.50 per person per year.

Conclusions

The feasibility study shows that even in a challenging environment such as Darfur, with ongoing security-related issues, that it is possible to conduct this type of project with the right partners on the ground. To achieve 90% acceptability of a new product in an IDP camp is very encouraging, and MI is excited by the possibility of expanding such a project to other parts of Sudan and/or to other displaced populations in Africa.

For further information, contact: Erin Tansey, email: etansey@micronutrient.org.za

E Tansey/MI, Sudan, 2006

SRCS volunteers in an IDP camp

E Tansey/MI, Sudan, 2006

Training on using the HemoCue

E Tansey/MI, Sudan, 2006

A mother receives a pot of Rahama

E Tansey/MI, Sudan, 2006

A group of boys living in the IDP camp

Muslim Aid

Beneficaries of Muslim Aid's operations

Name	Muslim Aid	Director(s)	Saif Ahmad CEO
Address	PO Box 3, London E1 1WP	Year formed	1985
Telephone	+44(0)20 7377 4200	Main office	UK
Fax	+44(0)20 7377 4201	Overseas staff (no)	Numerous
Website	http://www.muslimaid.org	HQ staff (no)	39 permanent, 13 temporary

The ENN interviewed Hamid Azad, the Head of Overseas programmes in Muslim Aid (MA) for this issues' agency profile slot. Muslim Aid headquarters is located at the business wing of the London Muslim Centre (LMC) next to the East London Mosque in Whitechapel, London and sits amongst as international an array of restaurants, coffee bars and shops as you could wish to see.

Hamid started by telling me a little bit about himself. Trained as a lawyer and with a long-standing interest in development and humanitarian work, Hamid joined 'Faith Regen UK' as a development manager. He then moved from housing and regeneration to head of community development and international projects. Following the Indian Ocean Tsunami in 2006, MA approached Faith Regen UK to help with their work in the region and Hamid was seconded as a consultant to work as the tsunami co-ordinator. Hamid stayed on, heading up the rehabilitation programme working mainly on shelter and housing in Somalia, India, Indonesia and Sri Lanka. In 2006, Hamid accepted the head of overseas programme post in MA.

MA was established in 1985 in response to the Ethiopian famine, with 23 Muslim organisations coming together to form the one entity. Yusuf Islam (otherwise known as Cat Stevens for those of us the wrong side of 50) set up MA and was its first chairman. MA currently works in 74 countries and has field offices in 12 of these including Sri Lanka, Pakistan, Iraq, Somalia, Sudan, Lebanon, Dubai, Bosnia, Cambodia and Gambia. New field offices are also about to be opened in the Philippines, India, Canada and Malaysia, with the latter two mainly having a fund raising role.

MA is an international relief and development agency with its roots in the humanitarian teachings of Islam. As Hamid explained by citing the Qur'anic verse '"and whosoever saves the life of one, it shall be as if he had saved the life of all mankind" is the ethos that underpins the way MA operates.'

Until recently, MA has largely depended on private donations from Muslims for the majority of its funding. Hamid explained that looking after the needy is a central element of Islamic life and that this creed operates irrespective of race or colour. Since it's inception, private funding has come from three sources. Zakat – where every well-off Muslim pays 2.5% of their surplus income, Fitra – which is normally paid in the month of Ramadan and is obligatory for all Muslims, and Qurbani (animal sacrifice) where every year in the month of Dhul Hujja rich Muslims sacrifice animals to feed the poor. In 2006, MA distributed more than £418,000 for the Ramadan programme and £430,000 for the Qurbani programme which, with the help of 110 partner organisations and field offices, provided food to people in over 60 countries - most of whom would normally have very little opportunity to consume meat.

However, since the Pakistan and Kashmir earthquake in 2005 and the December 26th tsunami the following year, MA's funding base has widened considerably with UNDP, UNHCR, WFP, World Bank and Asian Development Bank, CARE and CAFOD now numbered amongst its funding partners. In 2005, the total income for the year rose to £9.8 million, compared to only £4.8 million in 2004.

Hamid explained that MA has been involved in most humanitarian sectors including food distributions, water and sanitation, health and medical support, education, livelihood, shelter and construction and emergency support. MA has provided food aid packages in countries like Niger, the Philippines and the horn of Africa and also implemented selective feeding programmes with partners. MA has also become pioneers of a programme referred to as 'Food Bank'. This type of activity started in Sudan in partnership with Sudan Airways and various hotels. It involves utilising food that would otherwise be thrown away. Volunteers collect the food and distribute it to the urban poor and street children. The scheme has also been expanded to include supermarkets and food manufacturers as food sources. MAs approach to food insecurity is very much developmental, i.e. they see nutrition as part of livelihoods so that as soon as an emergency is over, the focus switches to promoting sustainable livelihoods, e.g. providing tools and livestock.

In their London HQ, MA has certain technical specialists, e.g. water experts, but no nutritionists. MA prefers to work through specialist agencies. In the recent Pakistan floods, they worked through partners that were expert in water purification. MA has a large cadre of volunteer staff (often students and business men/women). At the same time, their paid staff base is also large - around 2000. In the recent Indonesia crisis, as many as 1500 volunteers were employed to implement the response – most were students and many were unemployed engineers. The Jakarta office is now fully run by volunteers, with the head of office being a businessman who does not want payment.

In countries where there is no field office, e.g. India, MA work via partner agencies like Tamil Nadu relief agency. MA signs a memorandum of understanding with the partner agency once they have confidence in the agency. Partner agencies will sometimes apply to an MA regional office, e.g. Calcutta agencies applied to the Bangladesh field office. In Indonesia (pre-field office), MA worked post-tsunami with local partners identified by government. When an emergency developed in Niger, MA sent a delegation from HQ who identified local implementing partners. As Hamid said "MA

try to eliminate the causes of disasters by working through, and building capacity of, local partners who can then get involved in disaster prevention and preparedness". MA has recently tightened up partnership criteria.

MA is continually learning. Hamid felt that the quality of emergency food and nutrition programmes has improved significantly with experience, particularly with regard to food distribution and management. There is also now a far greater awareness and focus on making programme sustainable. Thus, food aid is always implemented in conjunction with seeds programmes. Distribution of milk products as part of selective feeding may be accompanied by provision of cows and training in how to pasteurise milk.

While MA is not a Disasters Emergency Committee (DEC) member, it does deliver DEC programmes via agencies like Oxfam. Oxfam helped MA source funding of £2.3 from the DEC for housing and livelihood programmes for the victims of the tsunami in Indonesia, Somalia and Sri Lanka. MA is also a signatory to the IFRC and SPHERE principles.

In response to a question about what sets MA apart from other agencies, Hamid singled out the fact that all field offices endeavour to employ almost exclusively local people (99%) and that there is a huge pool of dedicated volunteers that implement programmes. He also highlighted their enormous private donor funding base, e.g. more than 7000 individuals in the UK alone.

MA is nothing if not ambitious. Long term goals include "becoming a significant player in poverty alleviation by 2015". They aim to achieve this by targeting a few countries where they already have field offices.

Hamid cited a number of challenges for the organisation. These included obtaining longer-term institutional funding, overcoming preconceptions about a 'Muslim organisation' – MA is humanitarian and serves anyone affected by crisis or poverty, and the fact that competition for funding appears to be getting greater.

In response to a question about what it is like for a Muslim organisation to work in the UK, Hamid felt that while dealings with the UK Department for International Development (DFID) have so far been overly bureaucratic, their relationship with UK agencies like Oxfam, CAFOD and CARE International are thriving. As Hamid put it "any agency that gets to know MA ends up becoming a friend of MA."

Given the current climate around Islam and the Muslim world in the UK and west in general, MA presents an interesting challenge for the humanitarian sector. The agency operates in some of the most difficult areas of the world and yet delivers aid to enormous numbers of needy people. The challenge for humanitarian stakeholders will be to increasingly engage with, support and cooperate with agencies like MA who clearly occupy a unique niche and have a critical role to play in future humanitarian and developmental work.

A mother with her child attending the OPT in Awassa, Ethiopia

Valid International, Ethiopia, 2005

Impact of non-admission on CTC Programme Coverage

By Saul Guerrero, Valid International

Saul Guerrero is a Social and Community Development Advisor working for Valid International. Over the last four years, he has assisted in the design, implementation and evaluation of community mobilisation strategies for Community-based Therapeutic Care (CTC) programmes in Ethiopia, North and South Sudan, Malawi, Zambia, Niger, DRC and Indonesia.

This article presents the findings of a preliminary analysis by Valid International of questionnaires and Centric Systematic Area Sampling (CSAS) surveys implemented in seven countries by a variety of agencies and organisations, with a view to investigating the impact of non-admission on estimates of CTC programme coverage.

The desire, and proven capacity, to deliver high programme coverage has been one of the main forces behind the shift from centre-based treatment to community-based nutrition programming. As such, programme coverage has become, alongside mortality, recovery and defaulting rate, one of the primary indicators of programme success. Increasingly, community-based programmes – and Community-based Therapeutic Care (CTC) interventions in particular – are including coverage surveys as an integral part of their monitoring and evaluation procedures. The Centric Systematic Area Sampling (CSAS) method in particular, has produced useful information by exploring the spatial dimension of coverage data. Less known, however, is the fact that these surveys have also been key in enhancing our understanding of the reasons for non-attendance, or the barriers to access that hinder higher programme coverage.

Over the last few months, data from questionnaires conducted as part of CSAS surveys have been collected and analysed. The analysis has been conducted by Valid International, with support from Concern Worldwide, with data from CTC programmes implemented by agencies such as Save the Children-UK, Save the Children-US, Concern Worldwide, Merlin, GOAL, COOPI, World Vision, International Medical Corps, and UNICEF as well as Ministries of Health. This comparative analysis, across different programmes and countries (Ethiopia, Sudan, Malawi, Niger, Kenya, Burundi and Democratic Republic of the Congo), has started to reveal clear trends in health seeking behaviours and programme attendance. The most important result has been the importance of carers' first experience with a community-based programme in determining their subsequent willingness to re-visit the sites, either voluntarily or when referred. Results show that one in every three malnourished children not enrolled in CTC programmes have refused to go following a negative experience of rejection at an earlier date.

This article discusses the role of qualitative analysis in identifying the impact of rejection before describing some of the processes involved in rejection, and its transformation from a routine part of screening and referrals into one of the primary barriers to access. The article concludes by calling for 'rejection' to be addressed proactively in order to ensure optimal programme coverage.

Access and the Importance of Coverage in (Emergency) Nutrition Programming

Access to emergency nutrition programming is a multidimensional problem, which involves issues as pragmatic as distance between communities and programme sites, to the more subtle (but equally influential) aspects of awareness, local perceptions, acceptability of the bio-medical approaches and socio-cultural norms and taboos. The identification of 'a barrier to access' has been an integral part of CTC programming since its early days. Initially, 'barriers to access' were mostly identified qualitatively – through informal dialogue with programme staff, local leaders and carers. The informal analysis rapidly grew into more concerted and organised efforts, such as rapid socio-cultural assessments (often referred to as 'anthropological studies'), to identify barriers to access. These assessments began to shed light on some of the commonalities that affected CTC programmes intra and inter-nationally. For the first time, cross-cultural examination of these barriers became possible.

This more formal qualitative analysis was instrumental in the identification of trends in community perceptions and responses to CTC programmes. Awareness about the programme, treatment at the sites, local perceptions of malnutrition, acceptable forms of treatment (vis-à-vis CTC services), distance to the sites, and rejection were all identified as qualitative factors influencing CTC programme performance long before their quantitative impact on programme indicators was known.

The introduction of CSAS coverage surveys was partly a reflection of the need to know how efficiently barriers to access were being addressed by the new community-based model. Coverage thus became one of the primary measures of programme success.

CSAS offered the first quantitative look into the precise impact of rejection on programmes. Since 2004, CSAS surveys have included a questionnaire survey to be conducted with carers of severely malnourished children not enrolled in the programme. The survey aims to identify common barriers to access, so as to inform mobilisation activities. The surveys have gone through a process of iterative change, so as to create a template for widespread use that also allows context-specific variations to be adequately represented. The standardisation of the questionnaires has allowed for comparative analysis between the programmes – for trends to emerge, and for issues that were known to be crucial in ensuring success in particular programmes to be substantiated with evidence from different countries and different contexts.

Figure 1 Previous rejection of a child from the programme (% of total unprompted reasons given for non attendance)

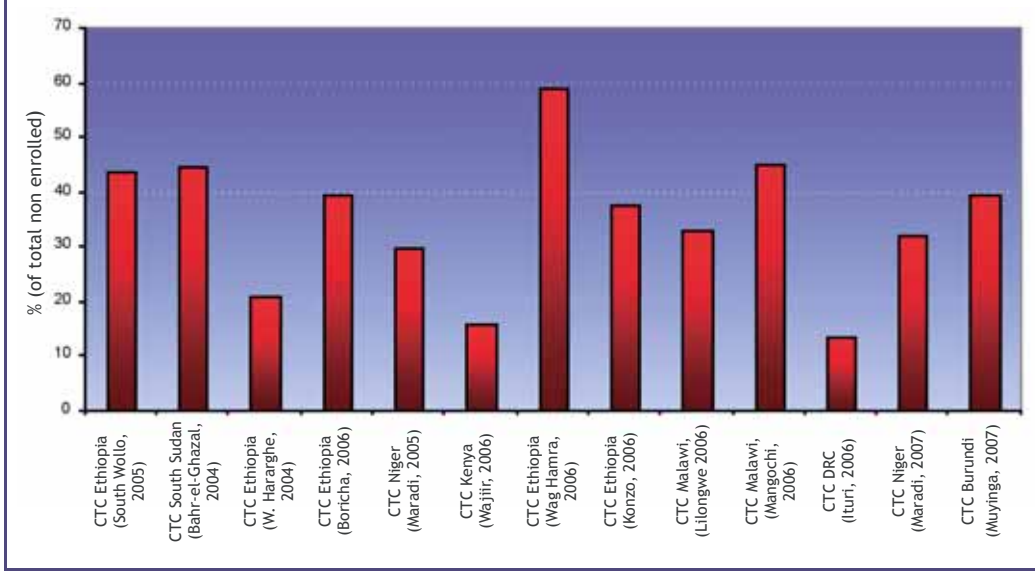
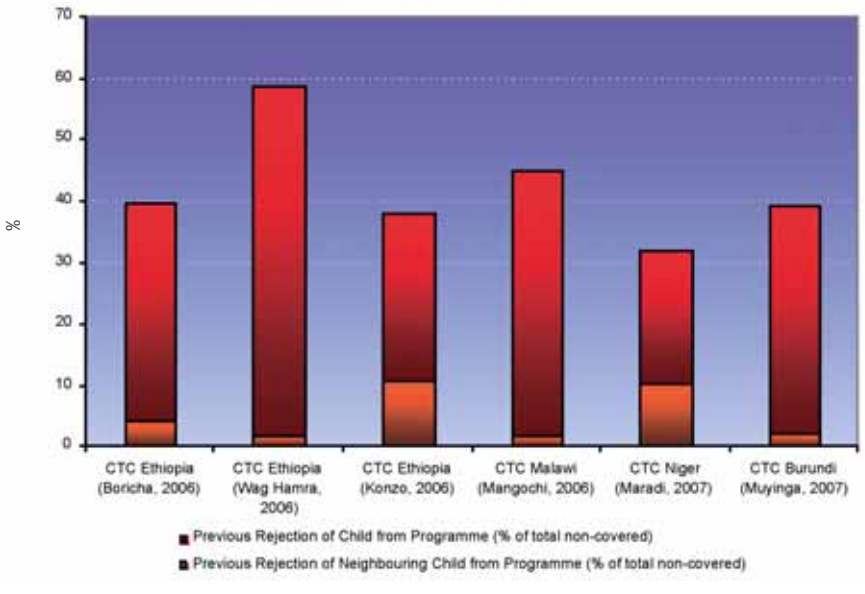


Figure 2 Previous rejection of a 'known' child from the programme (% of total unprompted reasons given for non-attendance)



In this new exploration of issues behind coverage, no other issue has proven to be as significant as previous rejection of a child from the programme. Understanding the elements that contribute to rejection and its actual impact on programme performance is crucial in the required efforts to curb its negative impact on coverage.

How Rejection Comes About: Factors that Increase or Decrease Rejection

The issue of rejection is closely linked to the ways in which communities get to know about the programme and are encouraged to seek help. In CTC programmes, there are three different ways in which this can happen; community sensitisation; active case-finding, and informal communication through word of mouth and self-referrals. Each of these three channels helps ensure high admissions, yet the way in which they are managed and organised determines whether the rates of rejection are high or low.

Optimal *community sensitisation*, for example, focuses on the use of concise and clear messages about the target population – using context-specific descriptions that communities can understand. Although people will try their luck, the clearer the sensitisation process is, the higher the rate of eligible children that will turn up at the sites (and the lower the rejection rate). Low levels of inappropriate attendance, also ensures that programme staff have time to explain why a child is being rejected, and clarify that the child can return if their condition deteriorates. Conversely, mass sensitisation processes – aimed at attracting all children for screening – may be tempting in emergency situations with high mortality rates. Yet, mass sensitisation and screenings raises unrealistic expectations. It also leads to high levels of rejection, whilst reducing the time available to programme staff to explain clearly the potential eligibility of the child at a later date.

Active case-finding also has the potential of reducing the number of non-eligible children turning up at the sites. However, until recently the use of Middle-Upper Arm Circumference (MUAC) as a referral criteria and Weight for Height (WfH) as admission criteria meant that many referred children (particularly younger children at high mortality risk) were turned away at the sites. The eligibility of a child on the basis of one and not the other is confusing to carers, and demands closer attention on the part of programme staff. Explaining the difference has consistently proved to be problematic and unsatisfactory, thus accounting for much of the frustration and 'negative feedback' created.

Informal communication ('word of mouth') has also proven to be one of the most important vectors for the exchange of ideas about programme activities. Its impact, however, is equally dependent on the experiences of community members with the programme. 'Word of mouth' is a double-edged sword – a 'good' programme will have positive 'word of mouth', while a 'bad' programme will have negative 'word of mouth'. The admission and rapid recovery of children on Ready-to-use Therapeutic Food (RUTF), for example, is a powerful motivator for people to seek assistance. Rejection, on the other hand, has proven to be just as powerful in discouraging community members from accessing programme services. In Niger, for example, perceptions that the programme rejected large numbers of children

led to 'fear of rejection' as one of the primary reasons for the non-attendance of malnourished children. In other programmes, the rejection of family members or neighbours has also become manifest in programme coverage. The precise impact of negative feedback in a community varies, but as the following section reveals, this is sufficiently important to warrant close attention by programme implementers.

The Impact of Rejection on Programme Coverage

The first series of analysis was based on 14 questionnaires used in an equal number of CTC programmes across seven countries (Ethiopia, Sudan, Malawi, Niger, Kenya, Burundi, and Democratic Republic of Congo). The results show a series of factors that affect programme coverage including distance to sites, knowledge about the programme and perceptions of the child's health. More significantly, in terms of frequency and impact, is previous rejection of children from the programme. In virtually all the programmes surveyed, mothers of malnourished children who have been previously turned away from the sites (either due to improper anthropometric readings, or failure to meet the criteria at the time) consistently refuse to take their children for subsequent screening. On average, previous rejection accounts for 1 in every 3 malnourished children not attending the programme. This means that the issue of rejection is responsible for a decrease of over 35% of programme coverage in the sample programmes surveyed.

The issue of rejection has wider repercussions in the communities. Rejection of a 'known' child (of the same family and/or community) also impacts on programme coverage. In five of the 14 programmes surveyed, rejection of a known child decreased programme coverage by an average of 5%. In these programmes, the combined rejection of a child and a known child reduced coverage by 42.23%.

Rejection and non-admittance also has an equally negative effect on community mobilisation activities. Case-finding and sensitisation very often relies on trust – trust in the volunteers responsible for identifying and referring cases, and in the community figures that mobilise communities to seek care. Whilst the admission and rapid recovery of children in the programme serves to strengthen the trust in these actors, rejection and lack of understanding about the reasons for rejection serves to erode the trust, and in many cases, alienate these actors from the communities in which they work and live. This in turn de-motivates workers and creates resentment which very often manifests itself in the form of decreased referrals or a complete cessation of case-finding activities in some areas. This means that children may only turn up late at the sites thus negating the advantages of early treatment that allows the bulk of cases to be treated in Outpatient Therapeutic Programmes (OTP) rather than stabilisation centres.

Addressing the Issue of Rejection

Rejection and the discontent often associated with it will always play a part in nutrition programmes. Limiting or reducing its effects on programme performance, however, is possible. This requires, above all, recognition of the importance of rejection (and all factors associated with it) on programme performance, and a commitment to implementing the necessary steps to curb its impact. Whilst the required steps are likely to vary from context to context, there are three fundamental steps that have proven to help address the incidence and impact of rejection.

Standardising referral and admission criteria

MUAC has been used as referral criteria in CTC programmes for some time. Yet, only recently has it also been introduced as admission criteria. The effects of this dual use have been positive – leading to a reduction in the numbers of children turning up at the sites inappropriately, and an increase in the proportional enrolment of those who do arrive.

Explaining admission and rejection to carers

Anthropometric errors will continue to lead to 'false positives' presenting at the sites. The decrease in the overall numbers of children attending the sites would allow programme staff to dedicate time to the crucial task of explaining the reasons for rejection. Furthermore, the ability of carers to return to sites for further screening (e.g. if the child's condition deteriorates) must also be part of this process.

Monitoring community perceptions

At a community level, mobilisation workers need to constantly monitor community attitudes towards the programme, so as to identify negative feedback at an early stage. When discontent and fear of rejection manifest themselves and start to hinder carer's compliance with referrals, community outreach workers must devote time to explaining the reasons for rejection and the risks associated with non-compliance. The role of community leaders in restoring trust in the programme has also proven to be critical.

For further information, contact Saul Guerrero, email: saul@validinternational.org

Valid International, Ethiopia, 2005

Queing at the OTP in Dowa, Malawi

L Machibya/UNHCR, Tanzania, 2007

A breastfeeding corner in one of the camps in Tanzania

Breastfeeding support in the refugee camps of North Western Tanzania

By Lucas Kulwa Machibya

Lucas Machibya has been working for UNHCR since June 1994 in the north-western Tanzania refugee operation as National Public Health Nutrition Officer. His scope of work has included the promotion and protection of breastfeeding, infant and young child feeding in the context of HIV/ AIDS and management of both moderately and severely malnourished children in the refugee camps.

The author would like to acknowledge the contributions of the following organisations to the work reflected in this article: Tanzanian Red Cross Society, Norwegian People's Aid, International Rescue, The International Baby Food Action Network (IBFAN) – Africa, UNICEF and WFP Northwestern Tanzania, ENN, CARE International and UNHCR Headquarters.

This article describes UNHCR's experiences of supporting breastfeeding in a refugee camp setting, and how the 'breastfeeding corners' initially established evolved into community based support approach.

The refugee operation of north-western Tanzania has been ongoing for 12 years. Burundian refugees were displaced by political and ethnic turmoil sparked by the assassination of the Hutu President Melchoir Ndadaye, followed by massacres in 1993, and a coup in 1996. Intensification of the conflict in some provinces and the policy of re-grouping the community in Burundi generated subsequent waves of refugee influx into Tanzania from 1996 to 2004. With regards to the Democratic Republic of Congo (DRC), three main rebel groups and numerous militia began fighting over a complex mix of economic, ethnic, state and factional interests, leading the country into a devastating humanitarian crisis in 1996.

In December 2006, the North Western Tanzania refugee operation was managing a total of 282,389 refugees, from Burundi (154,412) and DRC (127,967). The refugees are located in 11 refugee camps in four districts; Ngara district (Lukole camp), Kibondo district (Mtendeli, Kanembwa, Nduta and Mkugwa camps), Kasulu district (Nyarugusu, Muyovosi, Mtabila I and II) and Kigoma rural district (Lugufu I and II). In June 2006, UNHCR launched a repatriation programme for Burundian refugees, currently implemented in Kasulu, Kibondo and Ngara refugee camps. A repatriation scheme for Congolese refugees in Kigoma rural and Kasulu districts is ongoing. By December 2006, a total of 16,503 Congolese refugees and 41,908 Burundians refugees had been repatriated to their countries of origin.

UNHCR's position on infant and young child feeding

UNHCR seeks to protect and support optimal infant and young child feeding practice in its operations, which includes establishing exclusive breastfeeding among newborn infants, protecting and supporting exclusive breastfeeding for the first six months, timely and appropriate complementary feeding, and continued breastfeeding for at least the first 2 years of life. This is reflected in UNHCR's policy on the accep-

[1] Policy on the acceptance, distribution and use of milk products in refugee settings (2006). Available in English and French. Download from http:///www.unhcr.org or http://www.ennonline.net Contact: ABDALLAF@unhcr.org or HQTS01@unhcr.org

[2] An interagency collaboration developing policy guidance and capacity building on infant and young child feeding in emergencies since 1999. See online at www.ennnonline.net/ife

[3] More detailed coverage of UNHCR and partners' experiences in managing artificial feeding in refugee settings, largely in the context of HIV/AIDS, will be shared in a later issue of Field Exchange.

Box 1 Feeding difficulties experienced by mothers

- Mothers with twins and triplets had a feeling of producing inadequate breastmilk.
- Mothers with lactation problems (who felt they could not produce enough breastmilk to suckle the babies).
- Mothers with low birth weight babies.
- Newborn infants where the mother had died in childbirth.
- Mothers with sore or cracked nipples.
- Young mothers, i.e. girls aged below 18 years who had given birth ('early pregnancies').
- Babies rejected by their mothers
- Mothers opting not to breastfeed their babies due to their health status.
- Mothers severely ill.

Box 2 Breastfeeding support in the breastfeeding corners

Counselling of mothers facilitated identification of problems or poor practices related to breastfeeding, such as poor attachment of infants during breastfeeding. Women were very willing to discuss difficulties - mothers of more than one child often giving examples of the difficulties they had encountered while breastfeeding their firstborn. Mothers had less knowledge related to effective breastfeeding and often breastfed from the second breast without emptying the first. Often mothers who conceived while breastfeeding immediately stopped breastfeeding.

Mothers were taught on the importance of breastfeeding the baby during the night, whenever the baby wanted to feed and what signs to look for that indicate a baby wanted to feed. Breastfeeding women were taught how to watch for the signs of the 'full' breastfed baby where the baby suckles until he/she releases the breast him /herself and look satisfied or sleepy. To achieve this, the baby should suckle one breast for enough time to ensure the baby also consumes enough hind milk.

It was important to emphasise the recommendation to breastfeed exclusively for six months, to update on the previous recommendation of 4-6 months with which many were familiar.

tance, distribution and use of milk products in refugee settings[1] , which was updated in 2006 in close collaboration with the IFE Core Group[2]. This article focuses on UNHCR's experiences in protecting and supporting breastfeeding in a refugee setting[3].

The camp context

Breastfeeding was considered 'natural' among the Rwandans and Burundian women who gave birth in the refugee camps. However, some mothers of newborn infants were reporting difficulties that were heightened during emergency situations, when mothers often presented to the camps devastated and dehydrated (see box 1). Initially, systematic breastfeeding counselling was not carried out as part of the refugee operation. However in 1998, the camps experienced a severe epidemic of malaria, leading to severe anaemia among pregnant women and resulting in a high prevalence of low birth weight infants reaching as high as 35 per 1000 live births. The foetal death rate was estimated at 45.6/1,000 births, neonatal mortality was 29.3/1,000 live births and both neonatal and maternal deaths accounted for 16% of all deaths. This situation highlighted the urgent need for breastfeeding support targeted particularly at newborn infants.

Breastfeeding corners

A programme was established to protect, support and promote breastfeeding of newborn babies in accordance with WHO and other stakeholders[4]. This took the form of 'breastfeeding corners' that were established by humanitarian agencies working in the camps. These comprised rooms/areas located around the health facilities where breastfeeding women with feeding difficulties could come for support. At these facilities, the women were given breastfeeding assistance, and taught about infant feeding, personal hygiene, and ways to cook for themselves and their families. Babies were monitored to exclude any medical conditions that might affect breastfeeding. Attending women were given one family meal and one cup of porridge that was prepared at the kitchen in the health facilities. By February 2000, all health facilities in the camps in North Western Tanzania had implemented breastfeeding corners.

At the camp reception centres, 'at risk' groups were identified, including breastfeeding mothers who arrived in a poor condition – many presented dehydrated due to walking long distances without water or food. Medical screening was undertaken by humanitarian agencies. Mothers who delivered on the way were immediately registered for the breastfeeding corners, along with prima gravida (first-time mothers) and other women with lactation problems.

At the breastfeeding corners, newly arrived mothers who showed a lack of confidence in breastfeeding were supported through counselling and encouragement (see box 2). The counselling was geared towards restoring lost competencies and building psychological morale. In the camps, prima gravida were the most common group to have low confidence in breastfeeding. As well as breastfeeding support, mothers were advised on the importance of eating adequate food and drinking safe and clean water. They were also encouraged to use the improved cooking stoves, as fuel was not easily available and collecting wood involved walking long distances and was risky. This was conducted in conjunction with the agencies working on the environment, camp management and in community services. Mothers mostly attended the corners for three to four weeks.

Through health screening, babies or women who were ill were identified and treated according to the Ministry of Health case definition and protocol treatment. Most mothers and babies were found to have malaria and related fever; and mothers suffering from tiredness, lost confidence and stress. The breastfeeding corners were also used to capture all postnatal women to ensure that they had postnatal checkups, that the infant was vaccinated and to establish growth monitoring. Vitamin A was given to those women who had not received it immediately after delivery. Women with a Body Mass Index (BMI) < 18.5 were admitted to the supplementary feeding programme (SFP). However this was discontinued at the end of 2001 due to a reduction in resources.

Family disintegration is a common problem in emergencies. Women are left with several children to take care of, making it difficult to juggle breastfeeding a baby and look for food for the older children. The value of maintaining good family relationships was emphasised.

Babies whose mothers could not breastfeed

Where an infant could not be breastfed by his/her mother (based on established criteria), the implementing agencies worked together with the community to identify a "wet nurse" to breastfeed the baby – an approach that was already traditionally practiced. Where a wet nurse could not be identified or in the interim, infant formula or diluted therapeutic milk (F-100) were given to the infants. This necessitated admission of the infant together with his/her caregiver to phase 1 of a therapeutic feeding programme. Using diluted F100 was not ideal as it was not designed for this purpose and it was a challenge to decide on the most appropriate dilution.

The use of breast milk substitutes in this refugee programme requires close monitoring and a careful procurement system is in place among the health and nutrition agencies in the refugee camps. Within the camps, infant formula is part of the pharmacy items with a small budget line, and is procured in line with drugs and other medical consumables. The nutritionist is responsible for providing the specifications, which includes labelling in the appropriate language (English or Swahili). Careful estimation of the projected quantity is based on various reporting indicators including the rate of maternal deaths, early pregnancies from teenagers, prevention of mother to child transmission of HIV/AIDS to babies, the number of women opting not to exclusively breastfeeding their babies and the capacity of the agency to adhere to acceptable, feasible, affordable, sustainable and safe criteria (AFASS)[5]. In this regard, the National Breastfeeding Policy is also respected and followed accordingly.

Review of the breastfeeding corners

In early 2001, the breastfeeding corner approach at the health facility level was reviewed in consultation with beneficiaries and humanitarian workers involved in the health and nutrition programme, including WFP and UNICEF. The following concerns were raised:

- The majority of lactating women admitted to the breastfeeding corners were having a baby for the first time. This suggested that inadequate advice and support on successful breastfeeding was being offered during pregnancy.
- While the beneficiaries found that the service was beneficial to them, they expressed their concerns about time pressure to attend daily while leaving other small siblings at home without care.
- Staff responsible had inadequate time to spend with mothers to provide the required support and advice they needed.
- There may be enough capacity for support in the community rather than at the health facility to support lactating mothers, especially for those delivering for the first time.
- Increased number of admission to breast feeding corners due to increased early pregnancies meant that staff felt overwhelmed by the situation.
- There was a risk of cross infection while attending daily breastfeeding corners.

[4] Breastfeeding and healthy eating in pregnancy and lactation: Report on a WHO workshop; Arkhangelsk, Russia Federation, 5 – 8 October 1998. WHO Regional Office for Europe.

[5] WHO HIV and Infant Feeding Technical Consultation Consensus Statement. Held on behalf of the Inter-agency Task Team (IATT) on Prevention of HIV Infections in Pregnant Women, Mothers and their Infants. Geneva, October 25-27, 2006. Available at: http://www.who.int/child-adolescent-health/publications/NUTRITION/consensus_statement.htm

Box 3 Supplementary feeding programme and breastfeeding women

The supplementary feeding programme (SFP) supports pregnant women with a food premix comprised of 200 grams of Corn Soy Blend (CSB), 20 grams of sugar and 20 grams of cooking vegetable oil, providing approx 1009 kilocalories

Following a Joint Assessment of UNHCR and WFP in 2004, it was recommended to increase the food support to pregnant women from 2 weeks to three months post delivery. Subsequently the joint assessments of 2005 and 2006 recommended an extension of food support to lactating women to six months post delivery in order to align with the 6 months exclusive breastfeeding policy. Due to resource constraints, this recommendation has not been effected.

Box 4 Training materials used

Module 1 Infant Feeding in Emergencies for emergency relief staff, WHO, UNICEF, LINKAGES, IBFAN, ENN and additional contributors, November 2001. http://www.ennonline.net/ife/module1/index.html

Module 2 for health and nutrition workers in emergency situations. Version 1.0. December 2004. ENN, IBFAN, Terre Des hommes, UNICEF, UNHCR, WHO, WFP. http://www.ennonline.net/ife/module2/index.html

Breastfeeding Counselling: A Training Course, materials online http://www.who.int/child-adolescent-health/publications/NUTRITION/BFC.htm

- National Breastfeeding Policy.

A mother breastfeeding her young baby supported in a breastfeeding corner

L Machibya/UNHCR, Tanzania, 2007

To address these, a workshop was called in March 2001, in Kibondo that brought together Medical Coordinators, Medical Doctors, Nutritionists, Reproductive Health Managers / Officers and Community Services Coordinators. The following recommendations were made:

- A strategy to be developed to incorporate support to breastfeeding mothers in the community through mothers support groups and outreach activities.
- UNHCR and IP's medical and nutrition teams to identify specific activities and plans of action to successfully implement a community based approach to support breastfeeding of infants and feeding young children.
- Collaboration to be strengthened between Maternal and Child Health (MCH) services, community services, health information teams, traditional birth attendants (TBAs), nutritionists and medical staff in order to provide holistic support through the cycle of the pregnancy and through the period of continued breastfeeding (i.e. up to 24 months of age).
- UNICEF to provide additional in-service training, including health education and breastfeeding management.
- Given the benefits of the current SFP for pregnant women, WFP were requested to extend supplementary feeding to all lactating women until six months post delivery, but this has yet to happen (see box 3).
- Breastfeeding corners for the majority should not continue at the health facility but should gradually be integrated into the current MCH activities and the community. Only those few mothers with medical problems and low birth weight babies who cannot be managed at home should be admitted to the health facility for breastfeeding management.

Community based approach to support breastfeeding

The community based approach that was adopted following the workshop recommendations focused particularly on the protection, support and promotion of exclusive breastfeeding in infants under six months of age. The following steps were followed:

- There was a gradual phasing out of the breastfeeding corners from the health facilities in tandem with training of community-based workers on infant and young child feeding. Those trained, in turn, trained their colleagues in the community. Collectively considered as 'breastfeeding promoting agents', they included community health workers/health information teams, traditional birth attendants, women representative groups, home based care service providers, traditional healers and religious leaders.
- The breastfeeding promoting agents were key to the community based approach. They advocated and supported exclusive breastfeeding and proper practices during breastfeeding, and appropriate and timely complementary feeding. They also addressed psychological and moral support, including the importance of family unity in relation to breastfeeding and care of the infant and young child in general. They were also assigned various streets/blocks/villages in each camp to assist and support women who were breastfeeding.
- Existing women's income generation groups such as weaving groups, basket making groups, kitchen gardening groups, and restaurants groups along with groups involved in artisan activities were targeted by breastfeeding promoting agents. New mothers were encouraged to join these groups, so that they could benefit both from the income generated and receive breast feeding support.
- Cooking demonstrations were conducted to encourage preservation of nutrients during preparation and cooking. Mothers were taught about food preservation techniques and the importance of kitchen gardening activities that would support and supplement their household food security.
- Related topics included the importance of family hygiene and promotion of good health in the family, how to clothe and bathe the baby, and how to access safe and clean water in the camps for drinking and when preparing and cooking of their family foods. The community based staff also promoted proper disposal of babies/children excreta (in this population, children's excreta were considered safe not harmful) and educated on the importance of family latrines and their proper maintenances and use.

Capacity building

From 2001, both the UN and non-governmental agencies implementing the health and nutrition projects in the refugee camps began coordinating their approaches to infant and young child feeding in emergencies training, based on key training materials (see box 4).

National facilitators from the Tanzania Food and Nutrition Centre in Dar es Salaam are used for training of trainers (TOTs). The use of national facilitators is crucial because it ensures that new developments are recognised by the government in the sphere of infant and young child feeding, including breastfeeding. The local trainers continue to train on the ground. They collaborate and agree on a common work plan to follow when rolling out training in their MCH centres, outpatient departments, inpatient departments, SFPs, TFCs, paediatric wards and at large in the 'villages' within the camps.

Humanitarian workers who are trained in these courses includes Medical Doctors, Nutritionists, Clinical Officers, Nurse midwives, Nurse Officers, Reproductive Health Managers /Officers, and all nurses working in MCH programmes, in feeding centres, and paediatric and maternity/delivery wards.

One of the key challenges faced is adequate coverage of the camp because of frequent turnover of trained personnel exacerbated by the ongoing repatriation. For example, in one camp there are only 40 breastfeeding promoting agents, which is not sufficient to cover all villages – there are 52 villages in the camp. Ongoing training of newly recruited TBAs and community health workers is therefore paramount. It is also important to expand the skills and knowledge base regarding breastfeeding to other cadres of the staff in the camps, to ensure that the programme reaches the majority of the breastfeeding women in the camp's villages/zones or blocks.

Conclusions and recommendations

Breastfeeding corners built around health facilities are a valuable intervention during the acute phase of an emergency where a population is displaced, as most families will have been dislocated from normal support structures. Once the acute emergency period is over, other services in the camps are set up and functioning properly, and the community has re-established some level of support structures, breastfeeding support is best implemented as a community based approach.

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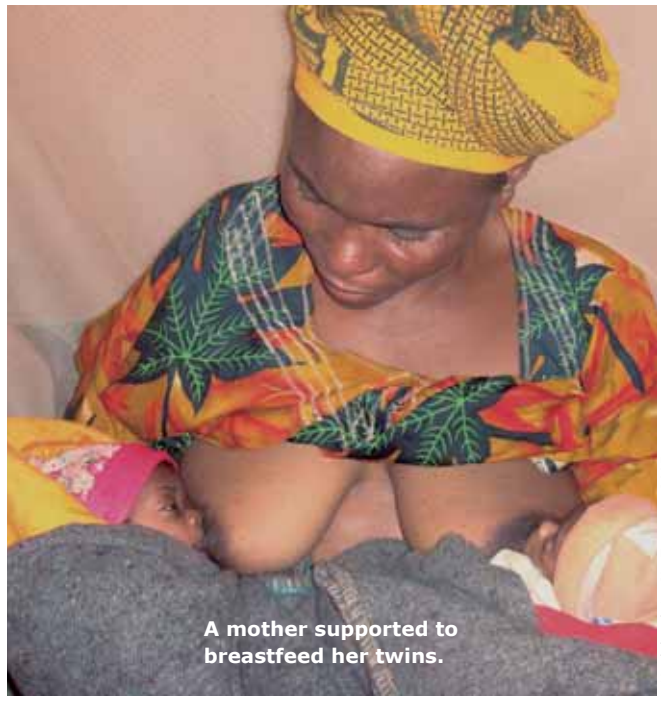
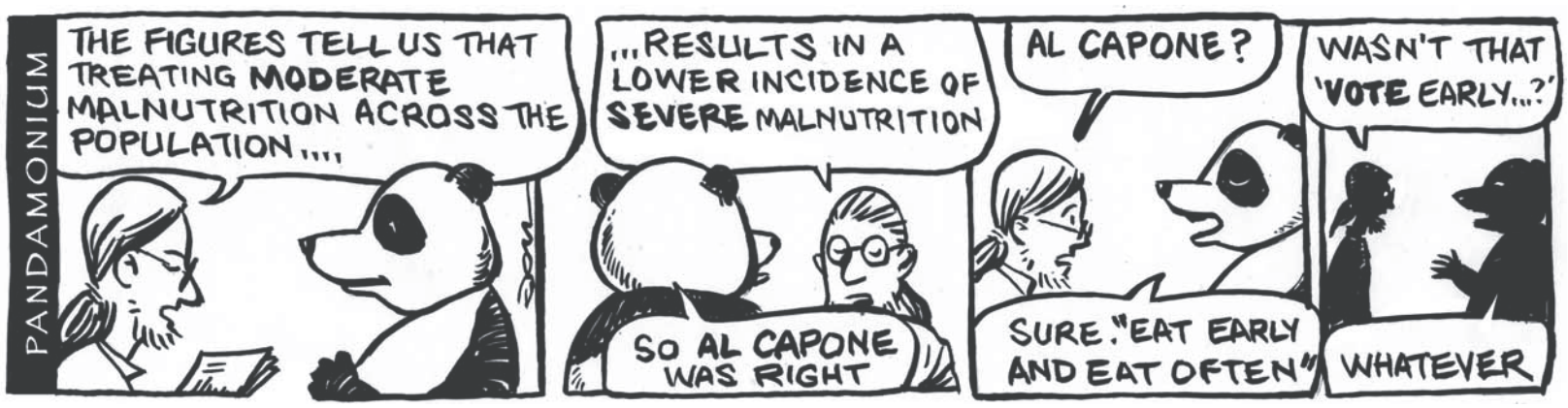


A mother supported to breastfeed her twins.

L Machibya/UNHCR, Tanzania, 2007



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MUAC measurement of a child in a camp for displaced Chadians, Koukou, Tchad
Valerie Babize/MSF, Tchad, 2007

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The Emergency Nutrition Network (ENN)

grew out of a series of interagency meetings focusing on food and nutritional aspects of emergencies. The meetings were hosted by UNHCR and attended by a number of UN agencies, NGOs, donors and academics. The Network is the result of a shared commitment to improve knowledge, stimulate learning and provide vital support and encouragement to food and nutrition workers involved in emergencies. The ENN officially began operations in November 1996 and has widespread support from UN agencies, NGOs, and donor governments. The network aims to improve emergency food and nutrition programme effectiveness by:

- providing a forum for the exchange of field level experiences
- strengthening humanitarian agency institutional memory
- keeping field staff up to date with current research and evaluation findings
- helping to identify subjects in the emergency food and nutrition sector which need more research.

The main output of the ENN is a tri-annual publication, Field-Exchange, which is devoted primarily to publishing field level articles and current research and evaluation findings relevant to the emergency food and nutrition sector.

The main target audience of the publication are food and nutrition workers involved in emergencies and those researching this area. The reporting and exchange of field level experiences is central to ENN activities.

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