

# Field Exchange

Emergency Nutrition Network

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- Cash and food transfers in Swaziland
  - Large-scale OTP in Ethiopia
  - Fresh food vouchers for refugees in Kenya
  - Nutrition supplementation in HIV context in Zambia
  - Challenges of IFE in Myanmar
  - Food insecurity and child malnutrition in North Bangladesh



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# From the Editor .....

**F**our of the six field articles in this issue of Field Exchange endeavour to demonstrate some form of intervention impact. The programmes are all very different; nutrition supplementation of HIV positive individuals in Zambia, community based nutrition programming in Bangladesh, a voucher scheme for fresh fruit and vegetables in a Dadaab refugee camp in Kenya and a joint cash and food programme in drought affected Swaziland. The programmes are either novel, i.e. the voucher scheme in Dadaab, are pilots contributing to a growing body of evidence, i.e. Zambia and Swaziland, or follow an approach for which there is a weak evidence base, i.e. the community-based nutrition programme in Bangladesh. All programmes therefore have a need to generate robust evidence of impact. The need for more evidence based programming is increasingly being emphasised in the nutrition sector. The recently published Lancet series on nutrition highlighted the lack of evidence for much of what is done in the name of nutrition programming. The ENN has also raised this issue on numerous occasions and published studies showing the lack of robust evidence for emergency nutrition programming (Duffield et al, 2004<sup>1</sup>). The efforts to demonstrate impact in the programmes included in this issue of Field Exchange are therefore to be welcomed. However, it is important to examine closely the quality of the evidence for impact cited in these articles and the way in which impact assessments were carried out.

The ENN has argued for several years now that lack of an evidence base for certain types of intervention has allowed the same interventions to be rolled out uncritically and that, in some cases, this may lead to ineffective programming. The recent experience of piloting CTC/CMAM<sup>2</sup> and the systematic effort to generate a robust evidence base demonstrates how important it is to take this approach. CTC/CMAM is now being rolled out and scaled up in numerous countries with great confidence and secure funding (see article in this issue on decentralising outpatient treatment of severe acute malnutrition (SAM) in Ethiopia). Yet, the CTC/CMAM story is fairly unique in our sector. Other new and promising intervention designs, while continuing to be piloted, rarely, if ever, seem to attract the same level of support from donors because of the absence of robust evidence of impact. New and potentially improved approaches and advances therefore arguably take longer to establish.

The four programmes described in articles in this issue all take different approaches to impact assessment. The most rigorous is the nutrition supplementation study in Zambia where patients were separated into an intervention group receiving a nutritional supplement, a group receiving Home Based Care rations and a control group who received no food support. Outcomes were measured and compared for food consumption, coping strategies, functional ability and anthropometry. In contrast, the nutritional statuses of the population groups targeted under the community nutrition programme in Bangladesh were not rigorously compared with control groups. Comparisons were made with national data and between discrete time periods. The findings were therefore not statistically meaningful. The refugee voucher programme in Dadaab refugee camp assessed impact in terms of dietary diversity and selective feeding programme coverage (the voucher acting as an incentive for mothers to bring children to the selective feeding programme). Programme impact on nutrition status and infant and young child feeding indicators were not therefore measured. The food and cash transfer programme in Swaziland assessed impact on the basis of a number of criteria including dietary diversity, expenditure patterns, coping strategies and empowerment of women. Again, impact on nutritional status was not measured.

It is not our intention to criticise the lack of robust impact assessment carried out by agencies implementing the type of nutrition interventions outlined in these field articles but rather to highlight the difficulty agencies face in generating a solid evidence base for what

they do. Most agencies are hard pushed enough just to implement a programme, let alone pilot an innovative approach. Conducting rigorous research to demonstrate impact as part of programme implementation is just a step too far for most agencies. Although donors require monitoring and evaluation of programmes, most donors do not insist on robust evidence of impact. They tend to be happy with evidence of process, i.e. that the programme delivered the outputs set out in the proposal. As a rule, agencies would love to be able to generate harder scientific evidence of impact. However, to do this they would need funding (research is not cheap) and expert support from research groups (most agencies do not have in-house expertise to design rigorous studies). For their part, research groups in the academic sector need a form of flexible funding. Even where research groups have strong working relationships with implementing UN agencies or non-governmental organisations, they can never be sure when an emergency programme is going to be implemented and for how long. The challenge for them is therefore how to secure funding for research that is flexible, i.e. can be mobilised when a research opportunity materialises. Typical donors for this type of operational research tend to require proposals with a long lead time and that expenditure of the grant takes place within discrete periods (although no-cost extensions are often permissible).

Overall, therefore, there are weak mechanisms in place to facilitate operational research and rigorous impact assessment involving randomised case control studies – the gold standard of research. It has been argued that ethical issues would, in any case, prevent this type of research or that it would be difficult to find control groups. However, step-wedged design is often feasible and a means of getting around this problem.

It is clear that donors need more technical expertise within their organisations and more flexible funding mechanisms that allow operational research. At the same time, implementing agencies must be more honest about whether there is an adequate evidence base for the type of intervention they are implementing and should endeavour to build up a body of evidence for effectiveness and impact at every opportunity. Without this, new and promising approaches will take many years to be adopted and rolled out, while more questionable programme approaches will continue to be implemented as a default position and because there is a track record of funding. The emergency nutrition sector is awash with the creative energy and drive to improve practice. All we need now is a better system which expedites the critical research needed to underpin this.

There are many other articles of interest in this issue of Field Exchange. The research summaries cover a broad range of topics. These include the relationship between protein energy malnutrition and genetic mutation, the impact of introducing new breeds of livestock as part of emergency restocking programmes on local genetic stocks in Bosnia-Herzegovina, and an Action Contre la Faim (ACF) study on the impact of the current food price crisis on rates of malnutrition in four African countries.

Finally, we hope you enjoy your 'free gift' with this issue. Funded by the Global Nutrition Cluster, the entire archive of Field Exchange (35 issues produced since 1996) has been catalogued into an online search database that is replicated on the CD enclosed. Feel free to copy the CD to share with others, or make your own from the link on the ENN website.

Enjoy!

Jeremy Shoham  
Editor

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

<sup>1</sup> Duffield A, Reid G, Walker D, Shoham J (2004). Review of the published literature for the impact and cost-effectiveness of six nutrition related emergency interventions. Report for the Emergency Nutrition Network. December 2004.

<sup>2</sup> Community Therapeutic Care/Community management of acute malnutrition

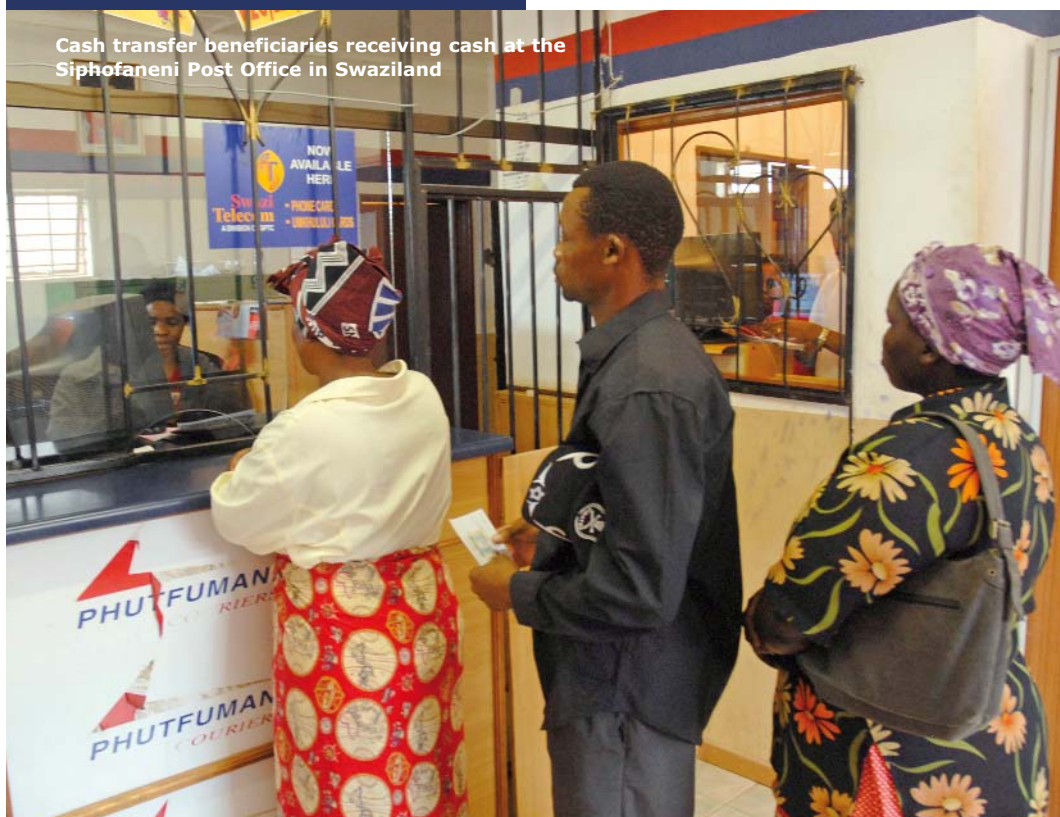


Queuing for cash transfer

SC UK, Swaziland, 2008



Cash transfer beneficiaries receiving cash at the Siphofaneni Post Office in Swaziland



Graeme Williams/Panos Pictures/Save the Children

# Swaziland Cash and Food Transfer Programme



By  
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Parts of this article summarise the findings of an independent evaluation carried out by Stephen Devereux, Institute of Development Studies, and Paul Jere, Independent Consultant, in June 2008<sup>1</sup>.

*This article outlines a short term emergency safety net programme by Save the Children UK, using a combination of food and cash transfers to households during a national food crisis in Swaziland.*

Severe drought during the 2007/2008 agricultural season caused a 60% drop in national maize production, resulting in the lowest harvest on record. This was exacerbated by forest fires in the highveld region of the country, which damaged the forestry industry and resulted in many lost labour opportunities. The combined shocks of drought and forest fires impacted heavily on an already vulnerable food security context. The majority of rural households in Swaziland depend on smallholder agriculture but yields are low and have been declining since 1996. The national poverty rate in Swaziland is currently 43%, while HIV prevalence is 26% (2007) and is believed to be the highest in the world. This has been significant in the reversal in human development indicators that had been rising until the mid 1990s. The current legacy from AIDS deaths is 69,000 orphans, which weighs heavily on the economy and society.

Although triggered largely by natural shocks, the clear trend of diminishing national food production indicates that chronic food insecurity is rising and that vulnerability to such shocks is likely to increase in future years. It also raises questions about existing strategies to combat or reverse these trends. Traditionally, safety net programmes in Swaziland have been in the form of monthly food distributions, causing significant dependency in some regions. In recent years, the Government has started to implement a number of cash based safety net programmes, including an old age grant, an orphans and vulnerable children (OVC) grant and a disability grant. Although this signals positive change, these have had marginal impact due to poor coverage and insufficient grant size.

## Design of programme

Agencies in Swaziland have routinely responded to food and income shortage with a standard food parcel of cereal (usually maize), pulses and vegetable oil. Cash transfers, in response to an emergency, are an entirely new type of intervention in the country. A detailed market feasibility assessment for using cash

provided the foundation for action, as it confirmed that local and national markets would support an increased demand for (largely food) products and suggested the inflationary effect would be insignificant. A cash transfer safety net programme was therefore designed by Save the Children (SC), to support beneficiary households with access to food and other basic items to meet immediate humanitarian food and non-food needs, while also protecting and promoting livelihoods. The Save the Children Emergency Drought Response project (EDR), funded by the UK Department for International Development (DFID), distributed a combination of food aid (50% ration) and cash (market value of a half food ration) to 6,200 households each month for 6 months. Beneficiary households were identified using nationally agreed vulnerability criteria from SC operational areas. Cash was transferred to private bank accounts opened with the support of SC at Standard Bank (SB), or through Post Office accounts. The exception was child-headed households who received their cash transfers directly from SC. Lump sum grants were transferred to each household during the first and last payments to strengthen livelihoods.

The cash transfers were accompanied by financial literacy training for all beneficiaries and a multimedia approach to communicating the function of bank accounts and use of ATMs (automated teller machines) to access the cash. Interactive community training sessions were organised to draw out issues for discussion arising with the cash transfers. Mock-up ATMs were used to demonstrate the cash withdrawal process. Posters, picture boards and information leaflets reinforced project messaging around savings, expected/appropriate spend of the transfers and the complaints procedure for the programme.

Considerable investment in a comprehensive monitoring and evaluation system generated useful data before and during the intervention. The investment included a market feasibility study and baseline survey (pre-implementation), and monthly monitoring of disbursements (cash and food), markets (prices and availability), and households (income, expenditure, assets and diets). A final evaluation survey was implemented in May 2008 (post-implementation). The sample of 1,784 households included 1,225 'cash plus food' recipients, 491 'food only' recipients and 68 child-headed households. Households who received food only were sampled from neighbouring districts, where agencies were implementing the national food distribution response. Child headed households received cash transfers and food rations but were treated as a separate category given their unique characteristic as minors.

## Impact

Although the EDR project was primarily a humanitarian intervention, cash transfers were envisaged as a mechanism that might help break the cycle of reliance on food aid and encourage debate about how to strengthen the

<sup>1</sup> Devereux, S. & Jere, P. (June 2008) Choice, Dignity and Empowerment – Cash and Food Transfers in Swaziland. An evaluation of Save the Children's Emergency Drought Response 2007/08.

<sup>2</sup> Part funded by Department for International Development (UK), Regional Hunger and Vulnerability Programme and World Food Programme.





capacity of chronically vulnerable rural families. The EDR served as a pilot for introducing cash transfers into the Swaziland context for the first time within a humanitarian context and had to contend with significant challenges as a response to acute (and possibly also chronic) food insecurity in Swaziland. Nine hypotheses were outlined at the outset of the programme as part of the monitoring and evaluation system<sup>2</sup> in order to test the impact of cash transfers, and compare the impact of a combination of food and cash to food only as an intervention. The key findings from a comprehensive independent evaluation<sup>3</sup> with regard to these hypotheses were as follows:

**1. Cash improves nutrition and dietary diversity.**

Cash transfers were unconditional, yet all recipients spent some of this cash on purchasing food for consumption. Cash recipients spent almost double the amount on food compared to 'food only' recipients, and purchased a wider variety of food groups, as evidenced by consistently higher dietary diversity scores among children in 'cash plus food' households. Self-reported hunger fell immediately after cash transfers were introduced (from 70% to 22% of 'cash plus food' recipients), but less dramatically among 'food only' recipients (from 79% to 61%). This positive impact on household food security was sustained throughout the project period, with fewer households that received cash transfers reporting hunger than those that received only food aid. *Hypothesis #1 was accepted.*

**2. Cash enables purchases of essential non-food items.**

Apart from purchasing food, EDR cash transfers were also allocated to a range of non-food needs, from household non-food items (99% of cash recipients, 7% of total spending), to health (58% of recipients, 2% of spending), to education (38% of recipients, 7% of spending), to clothing (39% of recipients, 3% of spending), to debt repayment (31% of recipients), to transport (7% of total spending). Cash was especially useful for meeting seasonal needs, such as school fees that are payable each year in

January. 'Food only' recipients spent less on all these categories, and were forced to deplete their assets or sell food items to raise the necessary cash. *Hypothesis #2 is accepted.*

**3. Cash is invested in assets and livelihoods.**

After food, livelihoods were the second largest category of household expenditure (16% of total household spending). Many cash recipients invested in their farm (e.g. buying fertiliser) or business (e.g. retailing or selling cooked food). Monitoring of harvests and business enterprises some months after the EDR intervention would tell us whether the production and income gains attributable to the cash transfers are sustained. Some cash transfers were saved as working capital, or as security against future shocks, and membership of savings clubs doubled. Cash recipients also protected their assets against depletion to meet food and non-food needs more effectively than did 'food only' recipients. Although both groups raised cash through asset sales, cash recipients also purchased assets using their cash transfers, including livestock, farm implements and household goods. Extrapolation from survey data suggests that more than 650 households acquired chickens using cash transfers, more than 200 households bought goats, about 375 bought hoes, and more than 150 bought radios. *Hypothesis #3 is accepted.*

**4. Local markets are strengthened by cash injections.**

In August 2007, the market feasibility survey predicted that cash transfers would cause food price inflation of 5-7% in local markets. In fact,

certainly contributed to an income multiplier effect, but its magnitude cannot be quantified with the available data. *Hypothesis #4 is neither accepted nor rejected.*

**5. Harmful coping strategies are avoided.**

Drought-affected households in rural Swaziland adopted the full range of 'coping strategies' observed in food crises elsewhere in Africa – rationing food, borrowing food or cash, migrating for work, selling livestock or other assets, and withdrawing children from school. There were no statistically significant differences in coping strategy adoption rates between 'cash plus food' and 'food only' households: 68% of cash recipients and 67% of 'food only' recipients rationed consumption, for instance. One explanation is that all EDR households were exposed to breaks that occurred in the food aid pipeline. If cash transfers had been increased, or if pure 'cash only' transfers had been delivered, these households would have been better protected. More severe strategies, such as withdrawing children from school (4%) and selling assets (2-3%), were adopted by small minorities of households. Nonetheless, the similarity across cash and food recipients implies that cash and food transfers were equally (in)effective in protecting families against the need to adopt austerity measures that could undermine their future livelihoods. *Hypothesis #5 is rejected.*

**6. Caring practices for children improve.**

There is insufficient empirical evidence on this topic, which requires a special in-depth study. *Hypothesis #6 is neither accepted nor rejected.*

**7. Women are empowered by receiving cash.**

Women were registered as cash recipients and bank account-holders in 90% of households receiving cash transfers, as a deliberate strategy to empower women and ensure that cash was used responsibly to meet the basic needs of women and vulnerable children. Concerns that disbursing cash to women in male-headed households could result in gender-based violence proved to be unfounded; most men accepted that women spend cash sensibly ("our wives know what to buy"). The main challenge to this decision at the intrahousehold level was not gendered but

'generational'. Many children, knowing that the transfer was calculated at E30 per person, demanded their 'share' of the money given to their mother or carer, even though the intention was that the cash should be used to benefit the household as a whole. *Hypothesis #7 is accepted.*

**8. Cash delivery systems are appropriate, timely, safe, well targeted and scaleable.**

The delivery of cash transfers raises a number of 'customer care' issues, including targeting, accessibility, timeliness and security at cash collection points. The EDR project performed well on all of these issues. Cash transfers were delivered in full to all recipients on specified



Cash transfer beneficiaries receiving cash at the Siphofaneni Post Office in Swaziland

food prices rose much more than this. The cost of a half ration in monitored markets peaked in January 2008 at 37% higher than when the baseline survey was conducted in October 2007, but the evidence is inconclusive as to what proportion of this was attributable to the cash transfers. Hindsight shows that international factors were influencing prices across the globe. Some traders opportunistically increased their prices on cash paydays. It seems most likely that EDR cash transfers had negligible impact on aggregate food prices at national level, but a (temporary) inflationary effect on prices at the local level. On the other hand, stocks of food and non-food commodities in shops and local markets did increase, confirming that supplies were responsive to increased demand. Purchases of these items by cash recipients

<sup>2</sup> By Stephen Devereux (Institute for Development Studies) and Paul Jere (independent consultant). See footnote 1.





SC UK, Swaziland, 2008

dates with no 'pipeline breaks' (unlike food aid), queuing times were long initially (over 4 hours) but fell (to under 2 hours) as efficiency improved, transport costs to pay-points were reimbursed, there were no reports of serious security problems, bank and Post Office staff treated cash recipients courteously and SC staff were always on hand to provide assistance (e.g. in using bank ATMs) and to listen to complaints. Many cash recipients switched from the Post Office to ATMs with little difficulty, and many expressed their intention to continue using the ATM after the project ended. A very small number of unpleasant incidents (e.g. verbal or physical abuse, drunkenness) were reported. On this evidence, there is no reason why cash transfers delivered through Post Offices and/or bank ATMs, could not be scaled up to national level in Swaziland, either in future emergencies or as a predictable social protection measure. *Hypothesis #8 is accepted.*

#### 9. Beneficiaries are more sympathetic to cash transfers than before.

The pre-intervention market feasibility and baseline surveys both recorded an overwhelming preference for food aid among rural households. Given a hypothetical choice, 60% of respondents in the market study (July 2007) chose food, 23% chose cash and 17% chose half food, half cash. In the post-intervention final evaluation survey (May 2008), this question produced very different responses: only 6.3% chose food, just 2.4% chose cash, and 91.3% chose half cash, half food. This finding is ambiguous; pure cash transfers were less preferred after the intervention than before due to perceived difficulties in accessing sufficient grain stocks (down from 23% to 6%), but the preference for cash or 'cash plus' increased from less than half to almost all respondents (up from 40% to 97.6%). This represents an endorsement of cash transfers as at least part of the solution to future food crises. *Hypothesis #9 is accepted.*

In addition to the above hypotheses, and in line with SC's mandate, the evaluation looked at spend by and on children. Child headed households spent their cash very responsibly, prioritising basic needs (food, non-food household items, clothing), followed by health and education. Some also used the cash transfers to pay off debts, and a smaller number shared their windfall income with others. This pattern followed the spend of adult headed households very closely, except that child-headed households did not report investing in farming or business, presumably because most are too

young to farm or run a business. Child headed households had a lower overall spending on a monthly basis as evidenced by data on coping strategies, where 90% of child headed households had rationed food during 2008, compared with 68% of adult headed households. This implies higher levels of vulnerability and poverty and suggests greater food insecurity within this group.

#### Six months on – how sustainable was the programme impact?

Continued monitoring of 920 programme beneficiary households, aimed to answer certain questions following the evaluation, namely the appropriateness of the substantial investment made in the transfer mechanism and the relative sustainability of impact on income generation.

For the households still accessing their private bank accounts beyond the end of the programme, there have been relatively few problems and a small proportion of these account holders have taken advantage of additional financial services provided by the bank, such as receiving the transfer of funds from outside of the country. Deposits and withdrawals have continued up to the date of this report and understanding of the financial aspects of the accounts remained strong following the project period.

However, not surprisingly, lack of disposable income prevented the majority of the EDR beneficiaries from using their accounts following the final transfer, when over 70% of households withdrew all funds and have not since used the accounts. Although activity within the accounts remained high during the 3 months immediately following the project, a combination of shocks such as further forest fires, extended dry spells and a 100% rise in cereal prices contributed to a decline in disposable income and subsequent account activity. By November 2008, only 4.6% of all EDR households were accessing their accounts.

The lump sums transferred during the EDR project designed to support livelihood activities and assets were invested well, with appropriate uses by over half of all beneficiary households (whilst some households prioritised food piling, healthcare and education). Post project monitoring confirmed that this investment continued to contribute to household income for 45% of all beneficiaries, a figure that declined during the months of August and September but stabilised at 30% in December. This figure represented around 60% of all households generating an income.

Transfers through bank accounts, whilst time consuming in the set up period, was a suitable approach and could be considered in short and long term cash transfer programmes. Mainstreaming of cash transfer procedures into long term safety net programmes and into disaster preparedness systems would support rapid scale up in emergency contexts.

#### Conclusions

In the programme evaluation in May 2008, evidence of the appropriateness of the response and the additional value of providing cash as an alternative to food were clearly identified, with especially encouraging patterns in child and household dietary diversity. Chronic malnutrition is a big challenge in Swaziland. The evaluation did, however, conclude that the project started too late to avoid adoption of harmful coping strategies. Considering the rapid decline in food security for the majority of households following the project, this report also concludes that the funding for the project finished too early.

The Government needs to take responsibility for the underlying issues contributing to food insecurity in Swaziland, namely poor investment in agricultural production, poor access to healthcare, insufficient social protection, lack of labour opportunities and rising food prices, and work together with partners towards providing long term policy based solutions that support families in a practical manner. Given the regularity of emergency events in Swaziland, the high level of vulnerability to hunger and chronic poverty, particularly in the Lowveld, predictable long term safety net transfers should be designed by Government in collaboration with relevant United Nations agencies and non-governmental organisations.

A range of long term safety net programmes, including a monthly unconditional cash transfer to the most vulnerable households, which could be scaled up to meet the additional needs during a drought year, would support the existing development efforts by the Government. For this purpose, the efficiency and proven beneficiary adoption rates make private bank accounts a feasible transfer mechanism for long term transfer programmes.

Cash transfers had a greater positive impact on children's diet than food distribution only and in such a fragile and vulnerable context, predictable safety net transfers must be designed as part of a broader Government social protection system.

For further information, contact: Rosie Jackson, email: [r.jackson@savethechildren.org.uk](mailto:r.jackson@savethechildren.org.uk)

Two related external evaluations of the project are available for download from the online library on the Save the Children website: <http://www.savethechildren.org.uk/en/54.htm>

Save the Children UK is part of the Cash Learning Partnership (CaLP) with Oxfam GB and the British Red Cross. The CaLP initiative was formed in 2006 to encourage joint learning around cash programming and has since developed material and facilitated a number of regional inter-agency cash trainings. If you are interested in engaging in training or research with the CaLP, please contact Rosie Jackson for more information, email: [r.jackson@savethechildren.org.uk](mailto:r.jackson@savethechildren.org.uk)

# Neonatal vitamin A supplementation to prevent mortality and morbidity in infancy

Summary of published review<sup>1</sup>

A recently published review set out to evaluate the effect of neonatal vitamin A supplementation on infant mortality, morbidity and early adverse effects. It involved a systematic review, meta-analysis, and meta-regression of randomised controlled trials. It considered randomised or quasi-randomised or cluster randomised, placebo controlled trials evaluating the effect of prophylactic, neonatal (<1 month) supplementation with synthetic vitamin A on mortality or morbidity within infancy (<1 year), and early adverse effects (7 days).

To investigate mortality during infancy, six trials were included, four in Asia and two in Africa. Two cluster randomised trials were included with design adjusted results. All trials were double blind with adequate allocation concealment, and loss to follow-up was below 10% in four trials. Three trials followed up participants up to 6 months of age. Two trials gave simultaneous maternal postpartum vitamin A supplementation (30% mothers in the intervention arm). In all trials, the cumulative dose of vitamin A was 50 000 IU, given as a single dose in five trials and as two doses in one trial. Information on prevalence of maternal night blindness was available in only three trials; of these, one recorded a prevalence <5%. Mortality during the neonatal period was pooled in three trials, two from Asia and one

from Africa. Data from the African trial pertained to the first seven days of life only. In the factorial design study, mothers in the placebo group received supplementation (synthetic vitamin A or  $\beta$ -carotene) identical to the intervention group. Cause specific mortality pooled data was ascertained by verbal autopsy from four trials, two each from Africa and Asia.

Specific limitations included: all the trials were conducted in developing countries, which limits the generalisation of findings. There were limited data on high risk groups (maternal night blindness 5% and low birth weight infants). In the two cluster randomised trials, adverse effects were unadjusted for design effect. Duration of follow-up was variable. Multiple subgroup and meta-regression analyses were used, which increased the possibility of false positive results.

## Conclusions

The authors found no evidence of a reduced risk of mortality during infancy (relative risk 0.92, 95% confidence interval 0.75 to 1.12,  $P=0.393$  random effect;  $I^2=54.1\%$ ) or of an increase in early adverse effects, including bulging fontanelle (1.16, 0.81 to 1.65,  $P=0.418$ ;  $I^2=65.3\%$ ). No variable emerged as a significant predictor of mortality, but data for important risk groups (high maternal night blindness prevalence and low birth weights) were

restricted. Limited data (from one to four trials) did not indicate a reduced risk of mortality during the neonatal period (0.90, 0.75 to 1.08,  $P=0.270$ ;  $I^2=0\%$ ), cause specific mortality, common morbidities (diarrhoea and others), and admission to hospital. There was, however, evidence of an increased risk of acute respiratory infection and a reduced risk of clinic visits.

The authors conclude there is no convincing evidence of a reduced risk of mortality and possibly morbidity or of increased early adverse effects after neonatal supplementation with vitamin A. They consider no justification for initiating such supplementation as a public health intervention in developing countries for reducing infant mortality and morbidity.

*'Rapid responses' to this paper, at BMJ online, raised some questions. These included whether there is a heterogeneity in the effect of Vitamin A in different populations AND THE NEED FOR further investigation to identify what sub-group of infants might benefit from neonatal supplementation. Access the full article and view 'rapid responses' at: [http://www.bmj.com/cgi/content/full/338/mar27\\_1/b919](http://www.bmj.com/cgi/content/full/338/mar27_1/b919)*

<sup>1</sup> Gogia S and Sachdev, HS (2009). Neonatal vitamin A supplementation for prevention of mortality and morbidity in infancy: systematic review of randomised controlled trials. BMJ 2009;338:b919

# Global Nutrition Index

Summary of research<sup>1</sup>

Researchers have recently developed a global nutritional index (GNI) modelled on the human development index. It is based on three indicators of nutritional status: deficits, excess and food security. The aim of the GNI is to provide a single statistic for each country according to its overall level of nutrition. There is currently no worldwide nutrition index to assess a nation's overall nutrition status, i.e. not just hunger. Such an index could be used by international agencies and governments to set priorities and targets in combating problems of malnutrition (both deficiency and excess) and improving human well-being and productivity.

To measure nutritional deficit, the age-standardised disability-adjusted life years (DALYs) lost per 100,000 population due to nutritional factors was chosen. This measure, compiled by the Global Burden of Disease Project, measures the burden of disease caused by protein-energy malnutrition, as well as that caused by micronutrient deficiency. Obesity was measured with the use of World Health Organisation (WHO) data for international comparisons of obesity in 2005, expressed as the percentage of women

aged 15-100 years with a Body Mass Index (BMI) greater than or equal to 30. Food security was measured with the use of the Food and Agriculture Organisation (FAO) statistic on the percentage of the population undernourished. This statistic takes into account the level of inequality in access to food within a country. It ranges from less than 2.5 for most developed countries, to 77 in the Democratic Republic of the Congo.

Calculations were made within four groups of countries (32 developed countries, 26 countries in transition, 64 low-mortality developing countries and 70 high-mortality developing countries, as well as between them – the Global Nutrition Index World wide (GNIg). Complete data were available for 192 countries.

The ranking of the highest and lowest countries in the four groups (with their GNIg values) is as follows: developed countries – Japan 1 (0.989), United States 99 (0.806); countries in transition – Estonia 10 (0.943), Tajikistan 173 (0.629); low-mortality developing countries – Republic of Korea 12 (0.939), Nauru 185 (0.565); high-mortality

developing countries – Algeria 47 (0.876), Sierra Leone 192 (0.420). A 'double burden', where nutrient deficits and excesses co-exist in the same country, was seen in Mauritania (rank 157), South Africa (rank 146), Samoa (rank 157), Lesotho (rank 160), and Fiji (rank 169). The correlation between GNIg and Human Development Index (HDI) was intermediate (0.74, 55% of variance explained), demonstrating that good nutrition and development are not necessarily synonymous.

Countries may be developed yet have a low GNIg (e.g. Australia, Canada and the US) and vice versa (e.g. Indonesia and China).

The authors conclude that as nutrition is fundamental to a nation's health and productivity, the GNI and GNIg should be used alongside the HDI to obtain an optimal index of a country's overall well-being.

<sup>1</sup> Rosenbloom, J, Kaluski, D and Berry, E (2008). A Global Nutritional Index. Food and Nutrition Bulletin, vol 29, no 4, p 266-275.



# Effect of food prices on household food security and malnutrition

Summary of report<sup>1</sup>



In 2007 and 2008, international food and oil prices soared causing riots in over 30 countries. Despite cereal prices falling on the global market, recent surveillance shows that food commodity prices have remained high or increased in 32 of the 36 vulnerable countries monitored. Concern about the impact of this prompted Action Against Hunger (AAH) to launch a number of country studies to understand better how high and volatile food commodity prices affect household food security and malnutrition. Assessments were conducted by AAH in Ethiopia, Sierra Leone, Central African Republic (CAR) and Liberia. Four basic questions were asked: Do high global food prices translate into local increases in malnutrition? Are all countries equally affected? How do the effects of high prices vary within a specific context? Was the response good enough?

The main conclusions of the AAH report based on these studies are as follows.

Data from Ethiopia show that high prices have been closely followed by an increase in malnutrition and under-five mortality rates. However, not all countries have been affected equally. Findings from CAR reveal only modest increases in prices and statistically insignificant increases in malnutrition. Research in Sierra Leone showed that even within the capital city, Freetown, prices and household reactions varied. Furthermore, the response to the current food security crisis has been poor – the AAH investigation in Liberia identified a number of flaws in the national responses to the soaring prices and rising malnutrition rates.

AAH asserts that there is enough evidence to suggest that high global food prices have had a substantial negative impact on livelihoods, and possibly malnutrition. High prices decrease access to food and lead to a reduction in the diversity and quantity of diets, especially among the poor. It is further argued that the similarity between coping mechanisms employed during seasonal price spikes and the global prices rise in 2008 is striking. This should inform the design of interventions, as responses to seasonal hunger are tried and tested and can be quickly built into national and international action plans. AAH also states that, to date, the international response to high and volatile food prices has been ineffectual. Donors should provide the necessary funds to immediately establish a pilot intervention to tackle comprehensively malnutrition in five priority countries.

The report points out that when presented at the High Level Conference on World Food Security in June 2008, the United Nations (UN)

Comprehensive Framework for Action conservatively estimated that US\$25-40 billion per year in additional funding is required to restore global food and nutritional security. AAH argue that this figure is insufficient and estimate a need of US\$38-70 billion per year for implementation of a minimum package effectively to combat seasonal hunger worldwide. This package does not include any provisions to promote agricultural development or functioning markets. Following the High Level Conference, world leaders pledged US\$12.3 billion to tackle the food crisis but have only donated US\$1 billion to date – the lowest ratio of materialised funds to funds pledged of any global appeal in recent history. The authors contrast this commitment with the World Food Programmes (WFP) success in achieving its target of US\$755 million in additional funds, and argue that this demonstrates that food aid remains the only large-scale comprehensive intervention that the international community is willing to support.

The report also asserts that the lack of response was not due to lack of information. Early warning systems such as FEWSNET<sup>2</sup> did provide sufficient information for response to the growing food price crisis as early as 2005. Failure to trigger serious debate until riots broke out and media coverage raised the stakes in early 2008 shows that the links between early warning systems and decision-making processes must be questioned and revised. The four case studies illustrate the importance of local variation and hence the need for locally-adapted responses. The recent emergence of the Global Partnership for Agriculture and Food Security and the UN High Level Task Force has injected new life into the debate surrounding food security and nutrition. The definition and design of national and global strategies should involve a wide range of actors, particularly civil society groups.

In the report, AAH call for major donors to demonstrate their commitment to the eradication of hunger immediately. Between US\$70 and \$150 million in predictable annual funding would allow a comprehensive pilot intervention to treat one million malnourished children in five priority countries.

The report concludes that if action is not taken now, then high food prices will trap millions of children in a downward spiral of poverty and malnutrition.

<sup>1</sup> AAH (2009). Feeding Hunger and Insecurity. The Global Food Price Crisis – a summary of AAH research in Ethiopia, Sierra Leone, Central African Republic and Liberia. Briefing Paper – January 2009. Available at: <http://www.aahuk.org/documents/Jan2009-FeedingHungerandInsecurity-HQ.pdf>

<sup>2</sup> USAID Famine Early Warning System, [www.fews.net](http://www.fews.net)

# Protein-energy malnutrition and chromosome changes

Summary of published research<sup>1</sup>

The relationship between protein-energy malnutrition and genetic damage has been studied in human beings and laboratory animals, but results are still conflicting. A recent study in Argentina set out to assess the structural chromosomal aberrations in peripheral blood lymphocytes of children with protein-energy malnutrition but no infection. A case-control study was performed. Samples were obtained from 25 primary malnourished infants and young children (mean age, 22 months). The control group consisted of 25 healthy children from the same population who were matched 1:1 by age and sex. Anthropometric and clinic evaluations were performed to assess nutritional condition. Before blood collection, parents of each individual were interviewed to complete a semi-structural survey specifying age, dietary habits, viral or bacterial diseases, previous exposure to diagnostic x-rays, and use of therapeutic drugs. After 48 hours, 100 cultured lymphocytes were analysed per patient. Statistical analysis was performed using the Epi Dat 3.0 programme.

The chromosomal aberration frequency was nearly seven times higher in malnourished infants than in controls (14.6% versus 2.2%). This difference was statistically significant ( $P < 0.001$ ) and may be explained by the occurrence of achromatic lesions, breaks, and telomeric associations. DNA damage could be attributed to several factors: severe deficiency of essential nutrients (i.e. zinc, iron and vitamin A) required in the synthesis of DNA maintenance factors, deterioration of repair mechanisms, allowing the persistence of an unusually high number of structural chromosomal aberrations and /or the absence of specific factors needed to protect the cell against oxidative DNA damage.

The researchers were aware of the limitations of the study, such as the small sample size and/or the difficulty in addressing the relationship between high levels of DNA damage and specific kinds of infections, drug treatments and severity of malnutrition. Further studies involving a larger number of patients are being planned in Argentina.

<sup>1</sup> Padula, G, Salceda, S and Seoane, A (2009). Protein-energy malnutrition contributes to increased structural chromosomal alteration frequencies in Argentinean children. *Science Direct. Nutrition Research* 29 (2009), pp 35-40. Available online at [www.sciencedirect.com](http://www.sciencedirect.com)



# Impact of restocking on animal genetic resources after disaster

## Summary of published research<sup>1</sup>



Kelley Lynch, Bangladesh, 2004

Herding cattle into water, in Bangladesh

Restocking is a favoured option in supporting livelihoods after a disaster. With the depletion of local livestock populations, the introduction of new species and breeds will affect biodiversity. However, the impact of restocking on animal genetic resources has largely been ignored. Historically, livestock development in the south has supported the large-scale mixing of genetic material among livestock populations. During colonial times, the development of many southern livestock industries was largely based on the introduction of exotic high producing stock. Success was achieved due to the high level of management inputs or by

large-scale cross-breeding. The unintended legacy of the approach was the widespread intermingling of local and exotic livestock gene pools. In many areas, cross-breeding has reached such an indeterminate state that the original breeds, either local or exotic, are largely unknown to small-holder farmers. Figures offered for the decline of indigenous breeds over the past century range from 16-40 percent. Development practitioners have also played their part in this process. During the 1960s and 1970s, the main objective of livestock projects was to increase production. Livestock transferred as part of these projects from northern

latitudes often suffered heat strain, exposure to new and frequently fatal diseases and additional environmental stresses. By the 1990s, livestock development policy makers and practitioners moved away from projects and programmes utilising exotic genetic resources.

A recently published paper has examined the consequences of restocking on biodiversity using a simple model. Utilising a hypothetical project based on cattle, the model demonstrates that more than one-third of the population was related to the original restocked animals after three generations. Under conditions of random breed selection, the figure declined to 20 percent. The tool was then applied to a donor-led restocking project implemented in Bosnia-Herzegovina. By restocking primarily with Simmental cattle, the model demonstrated that the implementation of a single restocking project is likely to have accelerated the decline of the indigenous Busa breed by a further nine per cent.

The authors draw the following conclusions. The potential ramifications of projects and programmes on biodiversity should, at a minimum, be considered as part of ex-ante<sup>2</sup> assessments or feasibility studies prior to restocking. Biodiversity issues should thus be confronted at the design stage. Sourcing sufficient livestock locally has proved problematic for many projects post-disaster. Therefore it is likely that animals, by necessity, will continue to be imported from external settings and ecosystems. Greater care and attention and control over the sourcing of restocked animals are likely to help ameliorate many of the attendant trade-offs with regard to biodiversity. There is an obvious trade-off between short-term production gains and longer-term biodiversity issues and greater awareness of the latter is required.

<sup>1</sup> Heffernan, C (2009). Biodiversity versus emergencies: the impact of restocking on animal genetic resources after disaster. *Disasters* 2009, vol 33 (2), pp 239-252

<sup>2</sup> Assessing/evaluating quality before a programme is launched.

## Do poverty, poor health and nutrition increase the risk of armed conflict onset?

Summary of published research<sup>1</sup>

A recent study analysed the effects of improving economic, food security and health status on the risk of armed conflict onset, focusing on the factors related to the millennium development goals. Researchers employed the discrete-time hazard model that allows examination of the time-varying effects of socioeconomic factors controlling for the reverse effect of conflict. The period studied was 1980-2005. In order to control for the effects of ongoing or previous conflict on socioeconomic factors, the researchers only examined the first conflict outbreak in a country during the sample period. Armed conflict was defined as a contested incompatibility between the government and opposition parties where the use of armed force results in at least 25 battle-related deaths per year. Data from the Uppsala Conflict Data Programme/Peace Research Institute, Oslo (UCDP/PRI) were used.

Previous studies of this type have applied logit models to a single cycle data. A key limitation of this is that it treats each period independently and misses inter-temporal effects on the risk of armed conflict. Hence the use of the discrete-time hazard model in this study.

The study found that headcount poverty index in conflict countries prior to the outbreak of the conflict was 31% higher than that for the countries not in conflict. The poverty gap index was 57% higher, child mortality rates were 102% higher, child malnutrition rates were 50% higher, and under-nutrition rates were 45% higher in conflict-onset countries. In contrast, in conflict-onset countries, per capita gross domestic product, annual gross domestic product (GDP) growth and the proportion of the population having access to safe water sources are 43-62% lower compared to those in non-conflict countries.

The results showed that income poverty and poor health and nutritional status are more significantly associated with armed conflict onset than GDP per capita, annual GDP growth, and the ratio of primary commodity exports over GDP. In particular, poor health and nutritional status seems to play a key role in inducing armed conflicts in poor countries.

According to the authors, these results indicate that when a majority of the poor and the malnourished reside in rural areas and depend on agriculture directly or indirectly, investments in public goods for agriculture and rural areas can be effective tools to achieve the multiple goals of reduced poverty, food security and limiting armed conflict. These include reducing riots in early 2008 triggered by high food prices. In essence, food policy can be an effective element of efforts to maintain stability.

The authors conclude that these findings demonstrate the importance of pro-poor policies for reducing the likelihood of armed conflict onset. However, what constitutes pro-poor will vary by country.

<sup>1</sup> Pinstrup-Anderson, P and Shimokawa, S (2008). Do poverty and poor health and nutrition increase the risk of armed conflict onset? *Food Policy*, vol 33, pp 513-520



# Social context of child care practices and nutrition in Niger

## Summary of published research<sup>1</sup>

In 2004-5, Niger suffered a food crisis during which global attention focused on high levels of acute malnutrition among children. In response, decentralised emergency nutrition programmes were introduced into much of southern Niger. However, based on the premise that child malnutrition is a chronic problem with complex links to food production and household food security, Concern Worldwide commissioned a qualitative anthropological study to investigate pathways by which children are rendered vulnerable in the context of a nutritional emergency. The study focused on household-level decisions that determine resource allocation and childcare practices in order to explain why practices apparently detrimental to children's health persist. Data were collected in January and February 2006 in Tahoua and Illela Districts from three major ethnic groups. A range of qualitative methods, e.g. semi-structured interview, direct participant observation, etc. were used to elicit local understanding and coping practices, with triangulation of material from different sources. Sampling was purposive to include households with diverse child nutritional status, livelihood security, subsistence systems, ethnic groups and distance from health services. Current and recent health status was ascertained from children's growth and health records.

Child care practices found to contribute to nutritional vulnerability included poor infant feeding practices, failure to direct high quality foods towards young children, poor hygiene practices and uptake of health services, and failure to dedicate extra resources to sick or failing children. Wider constraints on child-care practices and household decision-making included poverty and livelihood insecurity. This led to risk aversion and constrained decision-making, identity and status, e.g. not selling off a wedding trousseau, intra-household gender relations and bargaining power, and negotiation of beliefs and practices, e.g. cultural norms for infant and child feeding also have deleterious outcomes for child health and nutrition.

According to the authors of the study, child care practices, including intra-household allocation of food and health resources, must be understood within the range of constraints under which parents operate. These include chronic livelihood insecurity, with the concomitant need to maintain productive assets and social and symbolic capital. They also hinge upon power relations within households, with shifts of balance occurring where there is widespread out-migration and polygamy.

There are a number of policy implications of these findings.

- There is a need to invest in understanding the social context.
- It must be a priority to increase women's economic autonomy.
- There is a need to reduce costs of health care for children.
- Support for sustainable dietary improvement for children is critical.

The authors conclude that understanding and responding to the social context of child malnutrition will help humanitarian workers to integrate their efforts more effectively with longer-term development programmes aimed at improving livelihood security. It is now clear to humanitarian workers in Niger that they are dealing with a protracted crisis, which involves moving to a more integrated 'twin track approach' addressing both short-term needs and longer term causes of nutritional vulnerability. The authors argue that adequate prevention activities in the broadest sense must be implemented alongside the treatment programmes, and both should be gradually mainstreamed into health services and livelihood programmes.

<sup>1</sup> Hampshire, K et al (2009). The social context of childcare practices and child malnutrition in Niger's recent food crisis. *Disasters*, 2009, vol 33 (1), pp 132-151

## Storage, preparation, and usage of fortified food aid

### Summary of published research<sup>1</sup>



Nsima, a staple porridge, here made from fortified cornmeal, common in Malawi

Important considerations in determining whether fortified food aid commodities meet the nutritional needs of beneficiaries are how commodities are utilised and prepared and the degree to which micronutrient losses occur during handling and cooking by the beneficiaries. A field study was recently conducted in Uganda, Malawi and Guatemala to obtain data on storage, preparation

and usage of fortified blended food provided by USAID. The study involved interviews and observational data collection on the use of corn soy blend, cornmeal, soy-fortified cornmeal, soy-fortified bulgur, and fortified vegetable oil from over 100 households and two 'wet' feeding sites (where food is prepared and served by staff on-site).

Main findings of the study were that storage practices by beneficiaries appeared to be appropriate, and all commodities observed were free from off-flavours and odours. Cooking water was typically obtained from boreholes or open wells with a pH range of 4.7-7.7. Food preparation usually took place in covered areas with the use of an aluminium or clay pot over a wood-fuelled fire. Thin or thick porridges were the most common dishes prepared from cereal-based products, with concentration ranges of 10%-31% (weight for weight) in water. Cooking times for porridges ranged from 5-53 minutes, with a mean of 26 minutes. Tortillas and beverages were other preparations commonly observed in Guatemala. Vegetable oil was typically used for pan frying.

The authors of the study concluded that cooking fuel could be saved and nutritional quality probably improved if relief agencies emphasised shorter cooking times. Recommended cooking times for these products are 5-10 minutes. If cooked for longer, nutrients may be lost. The authors suggest that these data can be used to simulate preparation methods in the laboratory for assessment of the nutritional impact of cooking.

<sup>1</sup> Rowe, J et al (2008). Storage, preparation, and usage of fortified food aid among Guatemalan, Ugandan, and Malawian beneficiaries: A field study report. *Food and Nutrition Bulletin*, vol 29, no 3, 2008



# CSB versus fortified spread in wasted HIV infected adults in Malawi

## Summary of published research<sup>1</sup>



Eating ready-to-use fortified spread in Malawi

The prevalence of wasting, defined as a Body Mass Index (BMI) <18.5, in adults with advanced HIV infection in sub-Saharan Africa is 20-40%. Because food insecurity is common in sub-Saharan Africa, and an adequate diet is believed to be important for adherence to antiretroviral (ARV) therapy, supplementary feeding in conjunction with treatment is advocated as standard in the care of wasted adults with HIV in Malawi. Evidence to support the effectiveness of this practice however is limited, and there have been no published controlled trials showing the benefit of such food supplementation in settings with limited resources, whether people are receiving ARV therapy or not. The most commonly available supplementary food in food aid programmes is corn-soy blended flour (CSB). CSB, however, has been associated with disappointing results in supplementary feeding programmes among children, pregnant women and adults with HIV in sub-Saharan Africa. Specialised, energy dense ready-to-use fortified spreads<sup>1</sup> have also been recommended for feeding wasted adults with HIV. A fortified spread has been formulated to deliver the same nutrients as the milk-based therapeutic food F-100 for severely malnourished children, and its use has been associated with better outcomes in therapeutic and supplementary feeding of malnourished children with and without HIV.

A recent study set out to investigate the effect of CSB versus a fortified spread on BMI in wasted Malawian adults with HIV who were starting ARV therapy. The study was a randomised, investigator blinded, controlled trial in a large, public clinic associated with a referral hospital in Blantyre Malawi.

A total of 491 adults with a BMI <18.5 participated in the study. The two groups

were fed either ready-to-use fortified spread (n=245) or CSB (n=246). The main outcomes measured were changes in BMI and fat-free body mass after 3.5 months. Secondary outcomes were survival, CD4 count, HIV viral load, quality of life and adherence to ARV therapy.

The mean BMI at enrolment was 16.5. After 14 weeks, patients receiving fortified spread had a greater increase in BMI and fat-free body mass than those receiving corn-soy blend: 2.2 (SD 1.9) vs 1.7 (SD 1.6) (difference 0.5, 95% confidence interval 0.2-0.8), and 2.9 (SD 3.2) vs 2.2 (SD 3.0) kg (difference 0.7 kg, 0.2 to 1.2 kg) respectively. The mortality rate was 27% for those receiving fortified spread and 26% for those receiving CSB. No significant differences in the CD4 count, HIV viral load, assessment of quality of life, or adherence to antiretroviral therapy were noted between the two groups.

One study limitation was that food consumption was not observed in either of the groups, so that it was not possible to know the degree of adherence with the dietary recommendations. Also, there was no control group so that it was impossible to know what the nutritional status would have been without supplementary feeding. A control group was included in the original proposal but this was deemed unethical by the review board in Malawi, as it is national policy to give supplementary food to wasted patients with HIV/AIDS.

The authors concluded that supplementary feeding with fortified spread resulted in a greater increase in BMI and lean body mass than feeding with CSB. However, the authors note that the CSB provided in the study cost \$5.40 per patients per month, while fortified spread was three times as expensive at \$16. Formal cost benefit analyses are required to determine whether supplementary feeding strategies are cost effective when compared with other elements of clinical care given to those with HIV in sub-Saharan Africa.



Cooking CSB porridge

<sup>1</sup> MacDonald. N et al (2009). Supplementary feeding with either ready-to-use fortified spread or con-soy blend in wasted adults starting antiretroviral therapy in Malawi: randomised, investigator blinded, controlled trial. British Medical Journal 2009;338:b1867 doi:10.1136/bmj.b1867

<sup>2</sup> Also referred to as Ready to Use Therapeutic Foods (RUTF)

# Effect of short-term RUTF distribution on children in Niger

## Summary of published research<sup>1</sup>

Summary of published research<sup>1</sup>

Researchers from the Harvard School of Public Health have recently published the findings of a study to evaluate the effect of a 3-month distribution of Ready to Use Therapeutic Food (RUTF) on the nutritional status, mortality and morbidity of children aged 6 to 60 months in Niger.

The primary hypotheses were that village-level supplementation with RUTF in the months preceding the annual harvest would prevent declines in individual weight-for-height and reduce the incidence of wasting in children aged 6-60 months over a period of 8 months. Because RUTF may have additional health effects, the intervention effect on individual height-for-age, stunting, mortality and morbidity from malaria, diarrhoea and respiratory tract infection were also examined.

The study involved a cluster randomised trial of 12 villages in Maradi, Niger. Six villages were randomised to intervention and six villages to no intervention. All children in the study villages aged 6 to 60 months were eligible for recruitment. Maradi, which is located in the south-central part of the country bordering Nigeria, has some of the highest rates of malnutrition in the country. Prevalence of moderate wasting in Maradi was estimated to be 11.6% between January and May 2006.

Children with weight-for-height 80% or more of the National Centre for Health Statistics (NCHS) reference median in the six intervention villages received a monthly distribution of 1 packet per day of RUTF (92g [500kcal/d]) over 3 months from August to October 2006. Children in the six non-intervention villages received no preventive supplementation. Active surveillance for conditions requiring medical or nutritional treatment was conducted monthly in all 12 study villages, from August 2006 to March 2007.

The main measures of outcome of the study were changes in weight-for-height z score (WHZ) according to the WHO Growth Standards and incidence of wasting (WHZ < -2) over eight months of follow-up.

The main findings of the study were as follows.

The number of children with height and weight measurements in August, October, December 2006 and February 2007 was 3166, 3110, 2936 and 3026 respectively. The WHZ difference between the intervention and non-intervention groups was -0.10z (95% confidence interval [CI], -0.23 to 0.03) at baseline and 0.12z (95% confidence interval 0.02 to 0.21) after 8 months of follow-up. The adjusted effect of the intervention on WHZ from baseline to the end of follow-up was thus 0.22z (95% CI, 0.13 to 0.30). The absolute rate of wasting and severe wasting, respectively, was 0.17 events per child-



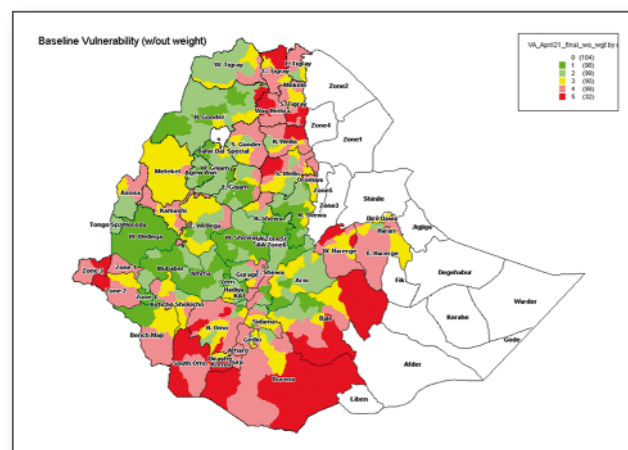


Mothers and children arriving for their monthly surveillance visits, as part of the trial

Epicentre/MSF, Niger, 2008

# Ethiopia's Chronic Vulnerability Index

## Summary of published research<sup>1</sup>



year (140 events/841 child-years) and 0.03 events per child-year (29 events/943 child-years) in the intervention villages, compared with 0.26 events per child-year (233 events/895 child-years) and 0.07 events per child-year (71 events/1029 child-years) in the non-intervention villages. The intervention thus resulted in a 36% (95% CI, 17% to 50%;  $p < 0.001$ ) reduction in the incidence of wasting and a 58% (95% CI, 43%-68%;  $p < 0.001$ ) reduction in the incidence of severe wasting. However, only a small benefit of supplementation appears to be sustained in the months after supplementation ceased. There was also a limited effect of RUTF supplementation on height-for-age z score (HAZ), no increased risk of malaria and reduction in mortality - the mortality rate was 0.007 deaths per child-year (7 deaths/986 child-years) in the intervention villages and 0.016 deaths per child-year (18 deaths/1099 child-years) in the non-intervention villages (adjusted hazard ratio, 0.51; 95% CI, 0.25 to 1.05).

The authors acknowledge several limitations with the study, including a small number of clusters that limited the benefits of randomisation, potential measurement error and inability to measure dietary intakes at recruitment or during the intervention.

The authors conclude that short-term supplementation of non-malnourished children with RUTF reduced the decline in WHZ and the incidence of wasting and severe wasting over 8 months. However, the effectiveness of preventive supplementation with RUTF in other settings may depend on RUTF acceptability, the extent of resale after distribution and the adequacy of the public health and nutrition systems in place. It is also argued that further research is warranted to identify the minimal dose required to achieve an effect and to compare the effect of other formulations of RUTF and locally available diets, which also may be effective in improving nutritional status in children. Information is also needed on the cost-effectiveness and feasibility of large scale RUTF distribution. The relatively high costs of imported RUTF and locally produced RUTF may challenge the effective scaling up of short-term RUTF supplementation.

The authors believe this to be the first population-based study to evaluate the effectiveness of RUTF in the prevention of wasting, although it is asserted that the protective effect of the intervention on WHZ decline and wasting incidence is consistent with the therapeutic use of RUTF in a variety of settings.

The concept of vulnerability has become an important part of food security analyses since the 1980s. It is seen as having two sides; exposure to external hazards, and an inability to cope with those shocks, attributed to social, political, and economic factors. Numerous attempts have been made to construct models to determine levels of vulnerability among populations. A paper, recently published in the journal *Disasters*, analyses one such attempt, the Chronic Vulnerability Index (CVI) - developed to measure levels of vulnerability to food insecurity in Ethiopia.

The CVI consists of an indicator-based series of maps of more and less vulnerable woredas or districts in Ethiopia. The example of the CVI reveals many of the difficulties associated with producing even a basic model of vulnerability that can be used in development or emergency response planning - it is intended for both. These problems emerge when vulnerability is assumed to be a linear, additive phenomenon with discrete causes and effects. An information product such as the CVI is ultimately of limited utility, given not only the data constraints in a country such as Ethiopia, but also the intricacy of interactions between hazards and the human systems that produce and complicate them. This renders the task of determining causation difficult.

The strength of the CVI is that it draws together data that previously were held in separate organisations. It also attempts national coverage, while many existing vulnerability studies are more limited in scale. The CVI also provides an overview of what data either are missing from its pooled sources or are inadequate at the woreda level. However, one of the problems the CVI faces is institutional. While the Vulnerability and Analysis Mapping (VAM) unit of the World Food Programme (WFP) currently takes responsibility for revising the CVI, its institutional location currently sits somewhere between the Disaster Prevention and Preparedness Agency (DPPC) and the Food Security Coordination Bureau (FSCB).

The authors suggest a number of means to help the CVI better address need. One possible modification is to improve the CVI as a targeting tool that defines more specifically the hazards to which people are considered vulnerable and map their tendency to occur in Ethiopia. This would produce a form of 'hazard atlas'. Another role would be to use the CVI to produce woreda profiles, which would be more descriptive and informative than numeric rankings. Many of the current

problems with the CVI lie in the construction and mapping of the composite index. The profiles could be compared with what agencies find in assessment missions.

This may not solve the problem of modelling vulnerability, but anything more conceptually complex than this requires tools that can effectively account for the interactions between the hazards and shocks and the human systems that produce and interact with them. One possible solution to this problem would be to find ways to incorporate more sophisticated indicators. Many of these are based on household-level surveys, which may present a problem for obtaining data on a national scale in the immediate future, but this may give organisations a goal to strive for. Looking beyond Ethiopia is instructive, e.g. the Food Security Assessment Unit for Somalia (FSAU).

The FSAU classification is mapped on a national scale along with immediate and underlying causes, the number of people affected and an indication of the phase trend, whether it is stable, worsening, improving or mixed. The FSAU is based on a wide range of sources, including agricultural production surveys, household surveys, market analysis, nutritional assessments, participatory research methods, reviews of secondary data, and satellite imagery and Geographic Information Systems (GIS). The CVI is restricted to secondary data analysis, satellite imagery and GIS.

In sum, the CVI indicates some of the difficulties of operationalising the concept of vulnerability. The method by which the index is constructed erases the socioeconomic relationships that are, or should be, the hallmark of vulnerability analysis. It also erases any understanding of the dynamic causal relationships between the hazards and coping factors it incorporates and the conditions of the population. Perhaps the main methodological question raised by the CVI is whether or not data collected for other purposes can be used effectively to assess vulnerability. The answer is not yet definitive, as the CVI is still being improved, and the product needs to be evaluated once it is put into use. But it would seem that a data construct such as the CVI can, at best, provide an indication of where more detailed assessments are needed, rather than an indication of the causes, levels and locations of chronic vulnerability.

<sup>1</sup> Isanaka. S et al (2009). Effect of preventive supplementation with Ready-to-use therapeutic food on the nutritional status, mortality and morbidity of children aged 6 to 60 months in Niger: a cluster randomised trial. *JAMA*. 2009;301 (3): 277-285

<sup>1</sup> Burg. J (2008). Measuring populations' vulnerabilities for famine and food security interventions: the case of Ethiopia's Chronic Vulnerability Index. *Disaster*, 2008, vol 32 (4), pp 609-630



# Decentralisation of out-patient management of severe malnutrition in Ethiopia

By Sylvie Chamois



Parents and children wait to be screened at the Yirba Health Centre OTP Programme



Sylvie Chamois has been a nutrition specialist with UNICEF Ethiopia for the past 6 years, and previously in Burundi for 18 months. Before joining UNICEF, she spent 6 years working as a nutritionist for Action Contre la Faim, mostly in emergency settings.

*This article describes the large-scale rollout of outpatient therapeutic care in Ethiopia in response to the 2008 escalation in severe acute malnutrition.*

Ethiopia has one of the highest under five mortality rates, with malnutrition contributing to more than half of all child deaths<sup>1</sup>. The 2005 Demographic and Health Survey revealed that, even when humanitarian requirements are at their lowest levels, over 300,000 children under the age of five are affected by severe wasting. Since 2004, UNICEF has supported the Ministry of Health (MOH) to integrate the in-patient and out-patient management of severe acute malnutrition into hospitals and health centres (i.e. at regional and district levels). The principle of decentralising the treatment of uncomplicated cases of malnutrition to the health post/ sub-district level was discussed with the Government. During these discussions, issues were raised over whether the Health Extension Programme<sup>2</sup> should be limited to the provision of preventative services and whether cases requiring curative services should be referred to either hospitals or health centres. However in 2008, with the drought affecting six out of ten regions, the Government decided to experiment with the decentralisation of severe acute malnutrition management.

## Situation

In 2008, UNICEF Ethiopia undertook one of the largest humanitarian responses to severe malnutrition ever undertaken globally. The agency alone procured 4,980 metric tons of Ready-to-Use Therapeutic Food (RUTF) and estimates that around 240,000 children suffering from severe acute malnutrition were admitted into Therapeutic Feeding Programmes (TFPs) nationwide.

In May 2008, dramatic and rapid increases of severe acute malnutrition levels were reported in Oromia and Southern Nations, Nationalities and People's (SNNP) regions<sup>3</sup>. This was the result of the poor performance of the March/April rains in the southern part of the country combined with the prevailing high market prices (food prices in rural Ethiopia have risen by 250% in the past 2-3 years)<sup>4</sup>. In these two regions alone, 193 districts were affected<sup>5</sup> where over 23 million people are living, including an estimated 440,000 and 110,000 children under five affected by moderate and severe acute malnutrition respectively. The MOH and international non-governmental organisations (NGOs)<sup>6</sup>, with UNICEF support, began implementing emergency feeding programmes under the coordination of the Emergency Nutrition Coordination Unit (ENCU), the nutrition cluster leader in Ethiopia.

By July 2008, only 74 out of the 193 affected districts (38%) were implementing emergency TFPs (both in and out-patient). The situation was further exacerbated by insufficient food aid and supplementary food in particular, that was meant to stabilise the acute food shortage and malnutrition levels<sup>7</sup>. Growing numbers of severely malnourished children and adolescents were arriving each day at the doors of

feeding sites, often coming from neighbouring districts. Scaling-up coverage and access to emergency feeding became imperative at this point.

## Strategy

Since 2004, UNICEF has been advocating for the integration of the management of severe acute malnutrition into the health system. Thanks to the Government leadership, this was successfully achieved in 165 hospitals and health centres where in and out-patient care were provided as of January 2008. However, the idea of integrating out-patient management of severe malnutrition into the Health Extension Programme (i.e. allowing Health Extension Workers to provide curative services) was still being discussed.

In 2008, the MOH actively engaged in the emergency nutrition response and concluded that the best option to prevent high mortality due to malnutrition was to decentralise the management of severe malnutrition to the health post/ sub-district level. In July 2008, UNICEF was requested to support the Family

<sup>1</sup> Black R. S. Morris and J. Bryce (2003). "Where and why are 10 million children dying every year?" *The Lancet* 361: 2226-34

<sup>2</sup> The Health Extension Programme delivers primary health and nutrition services at sub-district level by two female Health Extension Workers based in health posts; There is one health post per sub-district covering an average of 5,000 people

<sup>3</sup> Minutes of the Multi-Agency Nutrition Task Force meetings, Emergency Nutrition Coordination Unit/Disaster Preparedness and Prevention Agency, Ethiopia, 2008

<sup>4</sup> FEWS NET Ethiopia food security updates, USAID and WFP, 2008

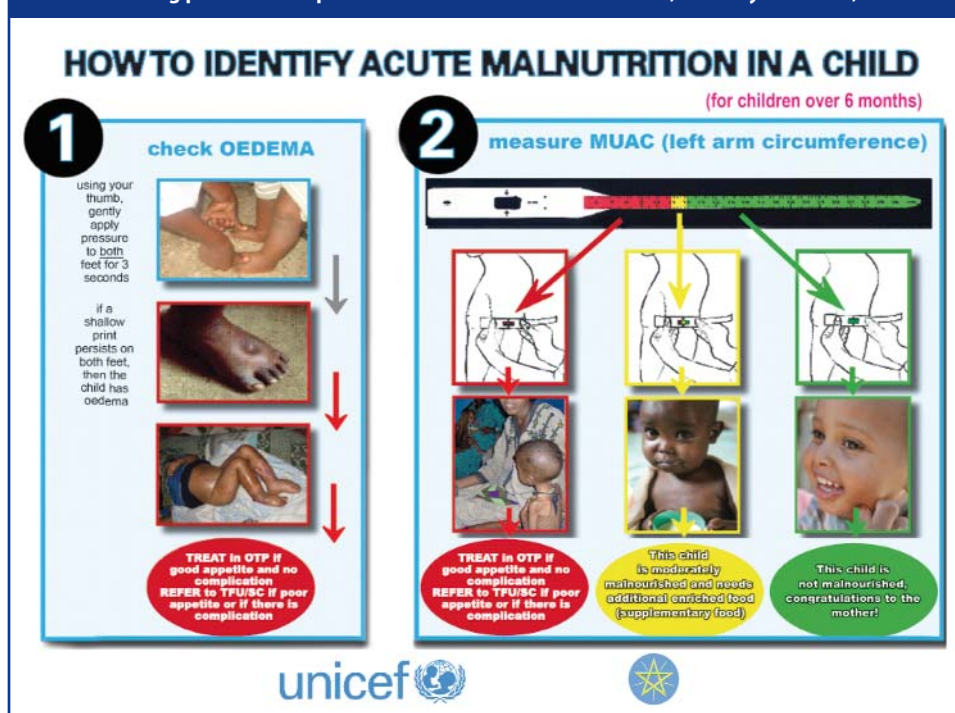
<sup>5</sup> WFP Ethiopia, Vulnerability Mapping Unit, 2008

<sup>6</sup> Action Contre la Faim, CARE, CONCERN, GOAL, International Medical Corps, MERLIN, Médecins Sans Frontière-Belgium, Greece and Holland, Samaritan's Purse, Save the Children-UK and US and World Vision

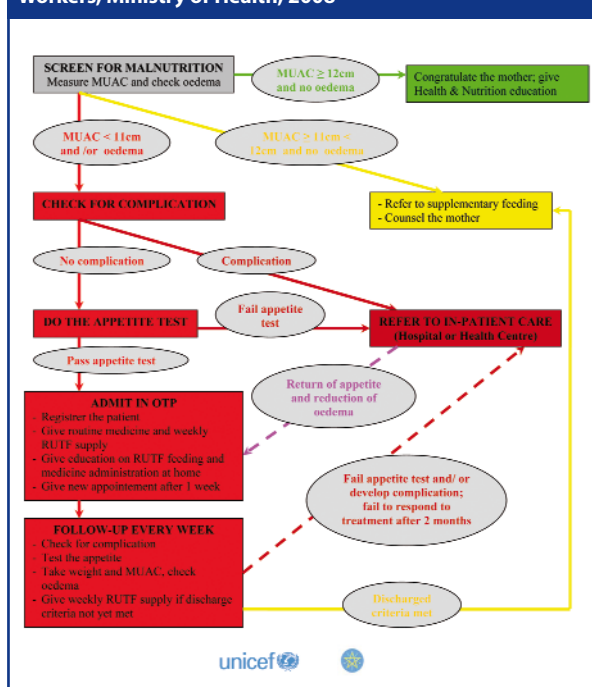
<sup>7</sup> External Drought Humanitarian Operation Weekly Situation Report, WFP Ethiopia, 2008



Box 1: Screening poster developed for the Health Extension Workers, Ministry of Health, 2008



Box 2: OTP flow chart developed for the Health Extension Workers, Ministry of Health, 2008



Health Department of the Ministry to roll-out Out-patient Therapeutic Programmes (OTPs) in 100 drought affected districts of Oromia and SNNP regions. This involved 1,239 health posts and 2,478 Health Extension Workers.

The first step was to develop a strategic action plan to define the objectives and operational modalities, as well as the human and financial resources, logistics and supplies needed. Within a week, a simplified guideline was elaborated in conjunction with a trainer's guide. A quick reference manual in two local languages was also developed and printed for use by Health Extension Workers. In close collaboration with the MOH, World Health Organisation (WHO) and NGOs and under the overall coordination of the ENCU, UNICEF supported the training of trainers with funding and technical assistance and also provided the districts with the necessary equipment, therapeutic food supply and logistics. Supervision and monitoring was also supported by UNICEF and partners.

### Progress and results

In July and August 2008, all the 2,478 Health Extension Workers were trained in the identification of severe acute malnutrition, referral of the complicated cases to in-patient facilities and management of the uncomplicated cases of severe acute malnutrition.

As of November 2008, 51 districts (50% of the initial plan) were managing OTPs in 455 health posts (36% of the total number of health

posts in the 100 districts), raising the service coverage from 38 to 65% in the two regions' affected areas.

A total of 27,739 children were reported to have been admitted in the 455 therapeutic feeding sites with overall positive performance indicators: 77.6% recovery, 0.7% mortality and 4.2% defaulter rates (Table 1). However, the report completion rate is still low (36.2%) and the real number of children treated is likely to be much higher. Efforts are currently underway to collect and compile the missing reports.

### Constraints

The main reason for reaching only 51 districts out of the 100 initially planned was the logistical challenge to supply, in the middle of the rainy season, a total of 1,239 health posts in 100 districts with all necessary resources. The lack of availability at the global level of sufficient RUTF also forced UNICEF to provide only one month supply at a time, instead of pre-positioning three months supply to cover the rainy season that also corresponds to the peak of the hungry season in Ethiopia.

Other constraints included the short time span to roll-out the programme, the need for maximum simplification of the protocol and the limited capacity of the District Health Offices to support and supervise the activities. However, the absolute priority for partners involved was rapidly to scale up coverage and access to therapeutic feeding services.

A small group of nutrition experts from the MOH, CONCERN, WHO and UNICEF was formed to elaborate, over one week, a simplified guideline and a trainer's guide without compromising the quality of care. Emphasis was given to a step-by-step practical approach describing actions to be taken by Health Extension Workers, from the screening and social mobilisation phase up to the discharge and reporting. It also included laminated copies of flow charts, summary and 'look-up' tables to be put on feeding site's walls for easy reference by the staff (see Boxes 1 and 2). The guideline was then converted into a pocket size quick reference manual in two local languages. Admission criteria were also limited to Mid-Upper Arm Circumference (MUAC) and



Table 1: OTP performance in the 455 OTP in Oromia and SNNP regions, TFP database, July to October 2008, ENCU/ Disaster Preparedness and Prevention Agency (DPPA)/ MOH

|   | OTP performance | SPHERE standards <sup>1</sup> |
|---|-----------------|-------------------------------|
| % report completed                                  | 36.2%           | -                             |
| Number admissions                                   | 27,739          | -                             |
| Cured   | 24,216 (77.6%)  | > 75%                         |
| Died  | 229 (0.7%)      | < 10%                         |
| Defaulter   | 1,303 (4.2%)    | -                             |
| Medical transfer                                    | 1,125 (3.6%)    | -                             |
| Transfer from OTP to Therapeutic Feeding Unit (TFU) | 3,419 (11%)     | -                             |
| Non respondent                                      | 900 (2.9%)      | -                             |

<sup>1</sup> The SPHERE project, Humanitarian Charter and Minimum Standards in Disaster Response, 2004 edition



bilateral oedema for children over 6 months old, to avoid the need for provision of measuring boards and calculation of the weight-for-height percentage (often poorly measured/calculated when undertaken by inexperienced professionals). Discharge criteria were based on weight gain and elimination of oedema.

To support District Health Offices supervising and monitoring the activities, UNICEF deployed three logisticians and four emergency nutritionists. Existing partnership with Population Service International (PSI) was also expanded and 32 newly graduated nurses were sent to the field to give on-site supervision and ensure good quality of care. RapidSMS technology was introduced to monitor and provide data on end-user distribution - stock availability and utilisation of RUTF (see Box 3). WHO also deployed field monitors to support the training and supervision of OTP sites.

However, commitment and good coordination, led by the MOH, enabled the programme to be effectively implemented in 455 health posts over a period of only two months. There was adequate, if not timely, donor commitment to the programme. Funding delays were overcome with UNICEF headquarters' approval for an Emergency Programme Fund loan to the Ethiopian Country Office.

## Discussion

The programme's initial plan, scale and pace was ambitious and only 36% of health posts (455/1,239) managed to implement the OTP over a two month period. One major bottleneck was the logistics to supply and monitor this high number of sites. In order to improve preparedness in the future, it is recommended that RUTF and OTP supplies be included in the Essential Commodity List so that health posts are regularly provided with the necessary items to run the programme. The health post supervision check list should also be revised to include the OTP activity.

Including TFP/ OTP reports into the national Health Management Information System (HMIS) and expanding the RapidSMS technology to include programme data would also help strengthen reporting.

Coordination and partnership were crucial for a successful operation. In this case, Government leadership and cluster coordination under the ENCU involving the MOH, the Ministry of Agriculture and Rural Development, NGOs, WFP, WHO, UNICEF and donors were essential to achieve any result. Bi-weekly coordination meetings were held both at federal and regional levels.

On the service provider side, Health Extension Workers reported that the programme was manageable, efficient and highly appreciated by the community, increasing their sense of professional satisfaction. The quick reference manual, as well as the handout

## Box 3: SMS technology supporting emergency operations: using RapidSMS

Given the scale of the operation in Ethiopia, one of the key challenges was monitoring distribution of RUTF. To deal with this, the country office recently piloted RapidSMS, a new technology that compiles mobile text message data into a real-time correlated report, in selected districts. In a one month trial period, a total of 939 mobile text message reports were received from 1,852 distribution centres. This was equivalent to 44% coverage of distribution sites (including multiple calls from some distribution centres).

### The challenge

The Country Office distributed 193,130 cartons of RUTF using 1,852 distribution centres. However, applying existing reporting and monitoring systems, i.e. field monitors reporting RUTF distribution and stock levels on a fortnightly basis by phone/fax to compile in a regional fortnightly report, did not allow a quick response to situations where there was an increased needs or low supply levels in remote areas.

### How it works

After an initial one-day RapidSMS training session, thirty-three monitors, each with a mobile phone, were dispatched to the field. Monitors were provided with a dial-in number and six pre-designated codes which they would enter into their phones followed by their monitoring data. Having sent the text data to UNICEF, the data were then automatically correlated by the RapidSMS computer programme into a real time report.

### The benefits

The new RapidSMS system enabled the collection of data on stock balance, new admissions, location of distribution centres, and the quantity of RUTF received and consumed in pilot districts. Due to the large number of distribution centres it was decided to implement RapidSMS in randomly selected Woredas, (administrative divisions of Ethiopia equivalent to districts), each fortnight, whereby the data were collected and the exercise repeated two weeks later at new Woredas.

### Challenges and the way forward

As was expected, the team confronted the usual teething and 'user problems', such as dialling codes. However, midway through the testing period, 64% of the monitors had mastered the system and were providing accurate input. By the end of the testing period, all monitors were using the system. Field monitors have also become familiar with some of the more advanced functions of RapidSMS. For example - sending alerts advising 'there is no stock'. These alerts, received in real time, enabled the nutrition section to dispatch immediate replenishments (rather than waiting for up to two weeks for a monitor to return from the field with the information).

At the conclusion of the test period, all participants agreed that the trial had been successful and that RapidSMS had proved to be an ideal tool to conduct real time monitoring. Given successful implementation of the pilot, UNICEF Ethiopia will explore the application of the RapidSMS system for additional monitoring activities.

For more information, contact: David Broughton, Logistics Expert, UNICEF Ethiopia.  
email: dbroughton@unicef.org

material, helped them feel confident enough to run the programme with minimal support.

Another lesson learnt is that the emergency response provided the opportunity for a policy change towards addressing severe malnutrition at the sub-district level, thereby greatly increasing coverage and access to TFPs in the country.

## Next steps

The next step is to strengthen the existing OTPs in the 455 health posts and effectively continue the rolling-out of the plan to the remaining 784 health posts. UNICEF and partners should use this opportunity to institutionalise out-patient management of severe acute malnutrition at health post level. Documenting this successful experience will be key to persuading the Government to integrate this into health policy and the Master Plan of Logistics. Active fund raising through the newly adopted National Nutrition Strategy that includes the management of severe acute malnutrition will also be crucial to sustain this programme.

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**Disclaimer:** The findings, interpretations, and conclusions in this article are those of the author. They do not necessarily represent the views of UNICEF, its Executive Directors, or the countries that they represent and should not be attributed to them.



Checking MUAC to determine nutrition status. Reading in the green range indicates child is not acutely malnourished.

Indrias Getachew/UNICEF, SINPR, Ethiopia, 2008



# Fact sheet on implementation of 2006 WHO Child Growth Standards

The IASC Global Nutrition Cluster and Standing Committee on Nutrition (SCN) Task Force on Assessment, Monitoring, and Evaluation have recently released a fact sheet on the implementation of 2006 WHO Child Growth Standards for emergency nutrition programmes for children aged 6-59 months.

The fact sheet aims at providing a standard framework and guidance on transitioning from the 1977 National Centre for Health Statistics/WHO growth reference (NCHS reference) to the 2006 WHO Child Growth Standards (WHO standards) for emergency nutrition surveys and new and existing emergency nutrition programmes for the management of acute malnutrition.

The fact sheet is aimed at users of the new WHO standards for emergency nutrition programmes and at policy makers, from donors, to Governments, UN agencies and NGOs. It attempts to answer the most common questions that may arise during the transition process. These include:

- How do WHO standards affect prevalence of acute malnutrition and number of children eligible for selective feeding programmes?
- How does the use of WHO standards affect outcomes of acutely malnourished children?
- What are the resource implications of the transition?
- How to use the WHO standards for calculating and reporting prevalence of acute malnutrition?
- Which cut-offs should be used for admission/discharge into nutrition programmes?
- Which types of software are available to be used with the WHO standards?



More detailed information can be found at the WHO website

<http://www.who.int/childgrowth>

Background reports to the development of the fact sheet are at <http://ocha.unog.ch/humanitarianreform/Default.aspx?tabid=74>

The fact sheet is available in English, French, Spanish and Arabic at

<http://www.humanitarianreform.org>

click on 'Nutrition'

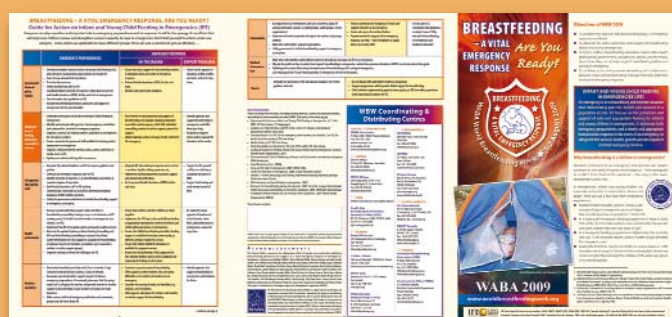
*Note: The fact sheet does not address the programming implications that transitioning to the WHO standards will have for infants under six months of*

*age, since investigations to date have focused on the 6-59 month age group. However infants under six months are the primary concern of the Management of Acute Malnutrition in Infants (MAMI) Project, which has included an investigation into the effects of the transition on this age-group.*

*The MAMI Report is due out in July 2009 and should help fill this current gap in understanding. In the meantime, programmers should be alert to and document admission of infants under six months to their programmes. Contrary to the expectations of many, use of the WHO Standards is expected to lead to large increases in the estimated prevalence of malnutrition in young infants (Eds).*

## Nutrition in emergencies training

World Breastfeeding Week 1 - 7 August 2009



World Breastfeeding Week is celebrated every year from 1 to 7 August in more than 120 countries to encourage breastfeeding and improve the health of babies around the world. It commemorates the Innocenti Declaration by the WHO and UNICEF in August 1990 to protect, promote and support breastfeeding. The annual event is organised by the World Alliance on Breastfeeding Action (WABA), a global network of individuals and organisations concerned with the protection, promotion and support of breastfeeding worldwide.

The theme of World Breastfeeding Week 2009 is 'Breastfeeding - a vital emergency response. Are you ready?' A Calendar and Action Folder to support the week has been developed in collaboration between the IFE Core Group (ENN and IBFAN-GIFA as lead authors) and WABA.

These materials, including translated versions, and supporting key resources are available at

<http://www.enonline.net/ife/breastfeedingweek.aspx> and at

<http://www.worldbreastfeedingweek.org/>

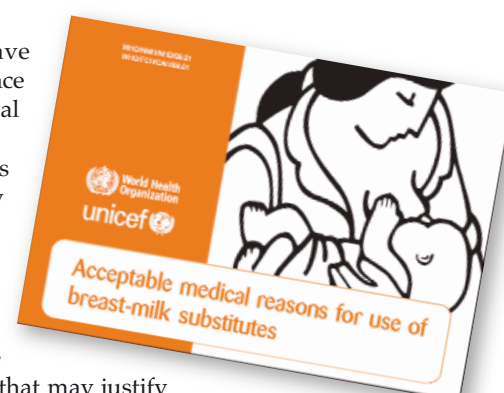
## Acceptable medical reasons for using breastmilk substitutes

WHO/UNICEF have updated their guidance on acceptable medical reasons for use of breastmilk substitutes (BMS) based on new scientific evidence.

This guidance details the small number of health conditions of the infant or the mother that may justify recommending that she does not breastfeed temporarily or permanently. These conditions, which concern very few mothers and their infants, are listed together with some health conditions of the mother that, although serious, are not medical reasons for using breast-milk substitutes.

The guidance emphasises the almost all mothers can breastfeed successfully and benefits both the mother and child. Whenever stopping breastfeeding is considered, the benefits of breastfeeding should be weighed against the risks posed by the presence of the specific conditions listed.

The guidance is available in English Portuguese and Spanish at: [http://www.who.int/child\\_adolescent\\_health/documents/WHO\\_FCH\\_CAH\\_09.01/en/index.html](http://www.who.int/child_adolescent_health/documents/WHO_FCH_CAH_09.01/en/index.html)





# Action to improve infant and young child feeding in nutrition and child health programmes

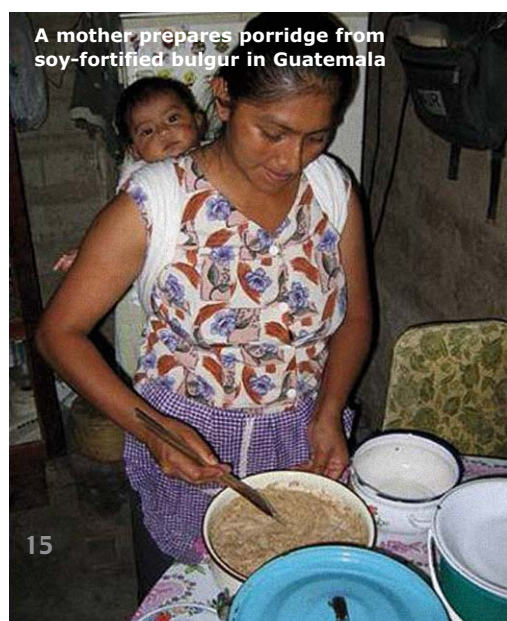
Proceedings of meeting<sup>1</sup>

Over 50 researchers, programme implementers, infant feeding experts and representatives of WHO and UNICEF headquarters departments and regional offices gathered in Geneva in October 2008, to discuss how to fill the gap between the progress that has been made in defining principles for appropriate feeding for infants and young children from 6 to 23 months and translating these into specific policies and programmes.

Participants recognised that there are not enough examples of well-documented, large-scale programmes that have successfully improved feeding practices in children 6-23 months of age and resulted in improved health outcomes. Therefore, there are important weaknesses in the evidence base for effective actions. Nevertheless, the evidence is strong to support the following conclusions:

## The context

- Recommendations for optimal infant and young child feeding include that infants should be exclusively breastfed for the first 6 months of life to achieve optimal growth, development and health, and thereafter, they should receive nutritionally adequate and safe complementary foods while breastfeeding continues up to 2 years or beyond.
- The Global Strategy for Infant and Young Child Feeding, endorsed by WHO Member States and the UNICEF Executive Board in 2002, provides the overall framework for actions needed to protect, promote and support appropriate feeding practices in infants and young children 0-23 months of age.
- The Planning Guide that accompanies the Global Strategy is intended to assist country teams to develop national plans of action to improve child nutrition. The Guide outlines what needs to be done to protect, promote and support breastfeeding. However, it should be updated to give further clarity on what is needed to strengthen complementary foods and feeding practices in children 6-23 months of age.
- Acknowledging the critical contribution of continued breastfeeding to child nutrition, the meeting focused mostly on evidence-based and feasible options to improve the quality of complementary foods and on caregivers' practices to enhance their intake.



A mother prepares porridge from soy-fortified bulgur in Guatemala

Bill Brodegard, Guatemala, 2005

## Effective interventions

- Appropriate nutrition in children 6-23 months of age requires interventions across the life span, from pregnancy into the first 2 years of life. They include support for maternal nutrition<sup>2</sup>, early initiation of breastfeeding, exclusive breastfeeding for 6 months, and the introduction of adequate complementary foods at 6 months with continued breastfeeding for 2 years of age or beyond. Influencing appropriate feeding practices is as critical as influencing availability and use of adequate foods.
- Quality counselling of mothers and caregivers, and appropriate behavioural change communication to other family and community decision-makers, are essential for improving infant and young child feeding practices. They should be at the centre of any strategy to improve infant and young child nutrition.
- Similarly, strategies should maximise the utilisation of locally produced foods in any given setting, and consider the promotion of additional products only if they can fill a critical gap in nutrients in an acceptable, feasible, affordable, sustainable and safe way, as a complement to continued breastfeeding and the local diet, not as a replacement.
- Where locally available foods alone will not satisfy nutritional requirements, various types of products offer promise. They may include centrally produced fortified foods, micro-nutrient powders, and lipid-based nutrient supplements. Further research and carefully monitored applications at scale are needed to generate more evidence on which product is best for which circumstance, how best to promote their correct utilisation, and their contribution to improving nutritional, developmental and health status in different circumstances.

## Effective programme design and delivery

- Effective programming should be based on sound information about the setting. It should follow a systematic approach that includes a situation assessment, formative research to identify locally appropriate feeding recommendations and solutions to barriers, development and pre-testing of a limited set of key messages that promote do-able actions, and dissemination of the messages through multiple channels and contacts, including individual counselling and behaviour change communication directed at the wider social environment and key decision-makers. Effective programming should also consider how to create demand among different stakeholders (politicians, health care providers and parents) for good child nutrition to enhance programme uptake.

- A variety of tools are available to support the listed steps in programme design, implementation, evaluation, and research, but there is need for a more detailed framework and user-friendly toolkit to guide assessment, prioritisation and planning of interventions for the age group 6-23 months. New methods, such as linear programming and ProPAN, should be built into such a toolkit.
- To strengthen the evidence base for effective interventions and programmes, especially for improving feeding in children 6-23 months of age, there is an urgent need for large-scale effectiveness studies and well-



What is the role of industrially produced products in complementary feeding?

MSF, Niger

- designed evaluations that also include measures of cost. In addition, a standard set of criteria on design, documentation and evaluation of programmes is needed to facilitate comparisons of process, impact and costs. Although the focus should be on effectiveness studies, efficacy research is needed as well to answer key questions.
- To promote production and utilisation of food supplements or fortified complementary foods in settings where they are needed, collaboration with the private sector is usually necessary. There is a need for standards for product formulation which may require collaboration with the private sector. Any collaboration however needs to be carried out in such a way that conflicts of interest are minimised and those that cannot be avoided are adequately dealt with. The efforts must benefit public health and be compliant with the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions (the Code).

<sup>1</sup> Strengthening action to improve feeding of infants and young children 6-23 months of age in nutrition and child health programmes. Geneva, 6-9 October 2008. WHO, UNICEF. Report of Proceedings. Available from WHO website or direct link: [http://whqlibdoc.who.int/publications/2008/9789241597890\\_eng.pdf](http://whqlibdoc.who.int/publications/2008/9789241597890_eng.pdf)

<sup>2</sup> Although not addressed at this meeting, other practices, such as delayed umbilical cord clamping to enhance newborn body iron stores and micronutrient supplementation and nutrition during pregnancy, are also very important for young child nutrition.



## New guidelines for livestock emergencies

A shepherd heading goats received in FAO emergency programme in Lebanon

Following the 2005 earthquake in Pakistan, several humanitarian organizations came forward to help households who had lost their livestock to rebuild herds and flocks by providing replacement animals. But most of the animal shelters in the affected areas had been destroyed, and there was also a major shortage of winter feed. Consequently, many of the animals donated failed to survive.

A new set of Livestock Emergency Guidelines and Standards (LEGS) has been developed to help ensure that the livelihoods of vulnerable livestock keepers are protected in future crises. Specifically, the LEGS initiative includes a set of international guidelines, decision support tools and standards for the design, implementation and assessment of livestock interventions on behalf of populations in need of emergency relief.

It will assist specialists in livestock and humanitarian assistance involved in responding to emergencies to identify the most appropriate live-

stock interventions in collaboration with local communities and service providers. LEGS addresses three central objectives:

- Providing rapid assistance to crisis-affected populations
- Assisting them to rebuild those assets
- Protecting their livestock assets

LEGS is a cooperative initiative between a number of different institutions and organizations including FAO, Feinstein Centre (Tufts University), The African Union, the International Committee for the Red Cross and Vétérinaires sans frontières (VSF) Europa.

Translation of LEGS into French, Arabic and Spanish and a comprehensive programme of training users of LEGS are being planned.

For further information, to purchase a hard copy or for a free downloadable version, visit [www.livestock-emergency.net](http://www.livestock-emergency.net)

## Focus on the Code and infant feeding in emergencies

Learn about specific issues regarding the International Code of Marketing of Breastmilk Substitutes in emergencies through FOCUS on the Code and infant feeding in emergencies. This new summary document was prepared by the IBFAN-International Code Documentation Centre (ICDC), Malaysia as a contribution to WBW 2009.

FOCUS is available online (including translated versions) at: <http://www.enonline.net/ife/breastfeedingweek.aspx>

Print copies will be included with the WABA Action Folder and are also available from IBFAN-GIFA, email: [rebecca.norton@gifa.org](mailto:rebecca.norton@gifa.org)



## New Method to Estimate Mortality in Crisis-Affected Populations

The Food and Nutrition Technical Assistance II Project (FANTA-2) has produced the report *A New Method to Estimate Mortality in Crisis-Affected Populations: Validation and Feasibility Study*.

In emergency settings, data on mortality rates and the causes and circumstances of death are crucial to guide health interventions and monitor their effectiveness.

Current methods to collect such data require substantial resources and feature important methodological limitations. In response, FANTA with the London School of Hygiene and Tropical Medicine, evaluated an alternative approach to obtaining a population-based measure of mortality, the exhaustive measurement (EM) method. The EM method captures deaths through an exhaustive search for all deaths occurring in the community over a defined and very short recall period. Unlike retrospective surveys, it provides nearly real-time mortality estimates, which are more useful for operational purposes in relief settings.

This report evaluates the validity of the EM method against a gold standard measure of mortality based on capture-recapture analysis in various operational settings (rural, urban, camp). Comparative estimates of the time and cost required for data collection and analysis using the EM method and retrospective surveys are provided. Findings from the study suggest that the performance of EM method is comparable to that of existing surveillance systems but appears more feasible in terms of time and financial inputs, as well as ethics, than alternatives. The method shows sufficient promise to warrant further development.

The report and three calculators for analysis of data collected using the EM method, can be downloaded from FANTA-2's website at [www.fanta-2.org](http://www.fanta-2.org) or contact: Kathleen M. MacDonald, Academy for Educational Development, Food and Nutrition Technical Assistance Project II, 1825 Connecticut Ave, NW, Washington, DC 20009-5721  
Tel. 202-884-8359 Fax 202-884-8432  
email: [kmacdonald@aed.org](mailto:kmacdonald@aed.org)



## Guidelines for estimating age in young children

The FAO have recently produced guidelines for estimating the month and year of birth of young children.

Several core food security and nutrition indicators require child age for their construction, e.g. anthropometric indicators such as weight-for-age and height-for-age, and infant and young child feeding indicators such as continued breastfeeding at one year. The guidelines are intended for health care workers, survey trainers and others who need to collect accurate information on child age in situations where there is no accurate written record of date of birth or a tradition of remembering birth dates. The WHO Anthro software package ([www.who.int/childgrowth/software](http://www.who.int/childgrowth/software)) is designed to accommodate the cases in which only the child's month and year of birth are obtainable.

Due to the widespread use of anthropometric indicators in children under five years of age, these guidelines and many of the examples provided are

tailored for use in this context. However the basic principles of age estimation can also be applied in other contexts such as for evaluating feeding and care practices of infants and young children or for use with age groups over five years.

The guidelines include:

- Age estimation techniques
- How to design and construct a calendar of events
- How to use the calendar
- Training of survey interviewers
- Quality enhancement checks

Annexes include example of a completed calendar of events, role play dialogues and standardised digit recording.

Download the FAO *Estimating the Month and Year of Birth of Young Children Guidelines* at <http://www.fao.org/docrep/011/aj984e/aj984e00.htm>



## Nutrition in Consolidated Appeals Process – a review

In late 2008, the Global Nutrition Cluster commissioned a review of 'How Nutrition is Framed in the Consolidated Appeals Process (CAP)' by Tufts University. The report just out (May 2009) examines the ways in which nutrition has been used to make a case for, and design responses to, humanitarian crises in the context of the consolidated appeals process (CAP) from 1992 to early 2009. Based on an extensive desk review, and interviews with key players in the nutrition community, it identifies broad trends in the global appeals process and uses seven case-studies to highlight details that are sometimes county-specific.

There is growing recognition of nutrition as a key element in crisis management, not simply as a measure of how bad things have become. The evolution in thinking is reflected in changes in the consolidated appeals process (CAP).

Since the initiation of the CAP process, a number of important trends can be identified in the treatment of nutrition as a theme and/or sector. These include an increasing distinction between nutrition, on the one hand, and food, water, and health, on the other; the importance of synergies across sectors if the goals of any one sector are to be achieved; and the importance of technical rigor in nutrition assessment and surveys.

More and more countries choose to present nutrition as a priority sector, theme or activity within their appeal. By 2008, the global CAP's mid-year review highlighted nutrition as a separate 'sector' for the first time, on par with education, health and water. This visibility has

not only brought more resources to bear on specific nutrition problems and tailored interventions, it has also raised expectations of what nutrition programming can achieve in the context of major emergencies.

It remains difficult to specify how much humanitarian aid is dedicated to nutrition. More disaggregated budgeting that allows for nutrition activities to be specifically identified and tracked would be enormously helpful in assessing how well defined needs are resourced, and how effectively those resources are used.

UNICEF, as lead agency for the Nutrition Cluster, has invested in strengthening its own capacities since 2006, and the cluster has been productive in developing training and guidance aimed at building a stronger cadre of field practitioners around the world. But, the challenge remains huge.

With regard to the work of the Global Nutrition Cluster several key issues were identified that need to be tackled by the Nutrition Cluster including capacity building, enhancing preparedness, and improving data management in the context of assessment, monitoring and surveillance. The review suggests that each of these three areas requires much more investment of effort and resources if the gaps (that remain wide) are to be closed.

While many appeals identify gaps in human and institutional capacity, and increasingly request funding to promote local training and national institution-building relevant to nutrition, the funding necessary rarely materialises.

This suggests that the Cluster should push for priority dialogue with donors on the urgent need to establish human and institutional capacity as essential to more effective future programming during disasters, and a key link between relief operations and longer-term development.

The misuse of terms and misrepresentation of nutrition data has declined in recent years, as terms, thresholds and metrics have become increasingly standardised across the international community. The role of the Nutrition Cluster in this regard has been important. Building on other international activities, the Cluster has helped in formulating guidelines for the preparation of appeals and developed training, assessment and analytical tools. All are needed in improving how nutrition problems are defined and how to make a convincing case for intervention.

Additional information needs, still rarely addressed in the CAP, relate to costs and effectiveness. Clear analysis of cost-effectiveness of different interventions is commonly lacking. Yet this is increasing essential to enable recommendations on optimal ration compositions, targeting and exit criteria, and on the appropriate mix of complementary activities to improve nutrition outcomes.

*How Nutrition is Framed in the Consolidated Appeals Process (CAP): A Review of 1992 to 2009.* Available from the Nutrition Cluster website, visit <http://www.humanitarianreform.org/> and click on 'Nutrition'.

## Upgrade to NutVal 2006 now available

NutVal is a spreadsheet application for planning and monitoring the nutritional content of general food aid rations. An upgrade to NutVal 2006 (version 2.2) is now available for download, and replaces version 2.1.

Some users may have experienced problems opening version 2.1 with certain Excel configurations. Version 2.2 has been modified to prevent this problem. Other functionality remains unchanged.

It is recommended that users download (<http://www.nutval.net/>) and use this version if they have experienced problems opening version 2.1.

Visit <http://www.nutval.net> to download the latest version of NutVal software and make comments, suggestions and bug reports.

For assistance write to: [support@nutval.net](mailto:support@nutval.net)

## Humanitarian Accountability Report

The Humanitarian Accountability Partnership (HAP International) has launched the 2008 Humanitarian Accountability Report (May 2009).

The 2008 report opens with an overview of humanitarian accountability in 2008, highlighting the principal developments and accountability trends across the humanitarian sector throughout the year. It concludes that the humanitarian system is moving in the right direction towards a system that champions the rights and the dignity of disaster survivors. The Humanitarian Accountability Survey collated views of accountability from more than 650 respondents, ranging from donors to senior managers based at head office to field site staff. The survey found growing confidence in improved practices towards disaster survivors, but also suggested that humanitarian aid workers perceived there was still a long way to go. Comparisons are made with previous years that reflect the increasing impact of humanitarian accountability on the sector.

The third chapter in the Report, 'Voices of disaster survivors', is devoted to the voices of people who experienced a humanitarian disaster in 2008. HAP staff spoke to over 685 people

affected by disaster and the quotations cited are drawn directly from these conversations.

The final two chapters provide the Accountability Workplan Implementation Reports from 21 HAP member agencies and the HAP Secretariat's Annual Report. To request a hardcopy of the 2008 Report please follow the link and to find out more about HAP International and humanitarian accountability please visit our website.

Copies of the report are available online at <http://www.hapinternational.org/projects/publications.aspx>

Hard copies can be requested online or from Jamie Munn, Research and Communications Manager, HAP International, Maison Internationale de l'Environnement 2, Chemin Balexert 7 (first floor, room 1-08), CH - 1219 Châtelaine, Geneva, Switzerland  
Tel: +41 (0) 227881641 Fax: +41 (0) 227973861 email: [jmun@hapinternational.org](mailto:jmun@hapinternational.org)





## Nutrition in emergencies training

7-11 September 2009, UK

This intensive week-long training course at the Centre for Public Health Nutrition, University of Westminster, London, provides an overview of current best practice in nutrition in emergencies.

The course is aimed at staff of UN agencies, NGOs and Ministry of Health who work in countries that are regularly affected by emergencies. Health workers, nutritionists, doctors, nurses and field programme managers are encouraged to apply. It is particularly suitable for people who wish to consolidate their knowledge and experience of working overseas and who are keen to learn from each other. Those with limited experience may also benefit from the course as no formal academic qualifications are required for entry.

The topics studied will include a general review of the different types of malnutrition, their direct and underlying causes, how malnutrition is measured, and common nutritional

interventions. Issues addressed include the measurement of malnutrition, food security, supplementary and therapeutic feeding programmes, community based care, infant feeding in emergencies and anthropometric surveys.

The course fee is £650 and university accommodation is available.

There are **two full scholarships** available for those from developing countries. For further information visit <http://www.westminster.ac.uk/page-9319>

Applications must be sent direct to the Scholarships department.

To request a paper application form or for further information, contact: Admissions and Marketing Office, University of Westminster, 115 New Cavendish Street, London W1W 6UW, UK. Tel: +44 (0)20 7911 5883, email: [cav-admissions@westminster.ac.uk](mailto:cav-admissions@westminster.ac.uk)

To discuss the course content, contact Kate Godden, Senior Lecturer, email: [k.godden@westminster.ac.uk](mailto:k.godden@westminster.ac.uk)

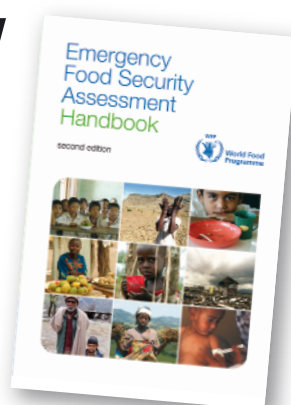
## New WFP Food Security Analysis guidelines

A set of new Food Security analysis guidelines, which include all latest methodological progress made by the World Food Programme (WFP) in the last years, is now available.

This has been developed under the guidance of leading food security experts from academia, research institutes, non-governmental organisations (NGOs) and partners, and drawing on years of field experience. It includes an updated, second edition of the Emergency Food Security Assessment (EFSA) Handbook, a first edition of the Comprehensive Food Security and Vulnerability Analysis (CFSVA) Guidelines, as well as Technical Guidance Sheets that cover specific aspects of food security and market analysis.

WFP has also revised the Crop and Food Security Assessment Missions Guidelines (CFSAM) in collaboration with the Food and Agriculture Organisation of the United Nations (FAO), and the Joint Assessment Missions (JAM) Guidelines with the Office of the United Nations High Commissioner for Refugees (UNHCR).

These guidelines and handbook define WFP's approaches to food security analysis. They are meant to strengthen and standardise food security and vulnerability analyses, allowing for comparisons across countries and over time. They will assist food security analysts in conduct-



ing refined analyses and to facilitate a better understanding of increasingly complex food security situations. They include the methodological progress made by WFP under the Strengthening Emergency Needs Assessment Capacity (SENAC) project, in particular on market analysis, measurement of food insecurity, and understanding the link food security and nutrition analysis<sup>1</sup>.

All the latest guidance materials are available at [www.wfp.org/food-security/guidelines](http://www.wfp.org/food-security/guidelines).

A brochure with a DVD encompassing all the guidelines is also available.

For further information, contact Jan Delbaere, WFP Food Security Analysis Service, email: [jan.delbaere@wfp.org](mailto:jan.delbaere@wfp.org).

For a copy of the DVD, contact [caroline.chaumont@wfp.org](mailto:caroline.chaumont@wfp.org)

<sup>1</sup> This project and complementary projects received the financial support of ECHO, DFID, The Citigroup Foundation, Germany, France, Canada, Belgium, Denmark, the Gates Foundation.



## Prevalence of moderate malnutrition in infants

### Summary of en-net discussion

By Tamsin Walters, en-net coordinator

Contributors: Nina Berry, Mike Golden, Mark Myatt, Marie McGrath

A recent discussion on en-net concerning availability of data on prevalence of malnutrition in infants under 6 months and comparison with children 6-59 months, provoked a discussion on the challenges of both measurement and interpretation of nutritional status of infants less than 6 months old.

While contributors suggested that these data is rarely available, there was acknowledgement of the importance of identifying growth faltering in this age group and responding appropriately to their needs. Both actions may entail very different modalities than are employed for children aged 6-59 months.

Infants under 6 months of age can be difficult to measure accurately, particularly if staff have not had sufficient training in anthropometric measurements and because babies' legs may not straighten, making it difficult to measure length. A very small error makes a big difference in weight-for-height z-score. In January 2008, ENN reported on an evaluation of anthropometric training of emergency nutrition staff which found that, while 88% of national nursing and nutritional staff said they felt very competent at undertaking weight measurements for children aged between 6 months and 5 years, this fell to 29% for infants less than 6 months<sup>1</sup>.

New WHO training materials note, "it is not possible to straighten the knees of newborns to the same degree as older children. Their knees are fragile and could be injured easily, so apply minimum pressure"<sup>2</sup>.

However, data on anthropometric indices of this age group are not easy to interpret since the aetiology of growth faltering may be complex. For example, it is preferable to have longitudinal data on an infant, as a low birth weight infant may be gaining weight and healthy but show low weight-for-age. Issues concerning feeding methods, health of baby and mother and infant care practices need to be explored in depth to get to the root of the problem.

Further, interventions in response to identified malnutrition in infants need to be carefully planned: lack of awareness of the risks associated with supplementary feeding for this age group and lack of expertise in infant feeding, including breastfeeding assessment, management and support, can compound the problem.

Entry criteria to nutrition programmes for infants under 6 months of age may more effectively be based on failure to breastfeed or inadequate infant feeding, rather than anthropometric indices, with the aim of capturing infants as growth faltering starts. Response comprising intensive support to mothers and their infants to re-establish appropriate and successful feeding.

See <http://www.en-net.org.uk/question/18.aspx> for more details.

The Management of Acute Malnutrition in Infants (MAMI) Project Report is due out end July 2009. See updates at [www.enonline.net/research](http://www.enonline.net/research)

en-net is a free online technical forum operated by the ENN, to help access technical answers to operational challenges. It is funded by USAID/OFDA. Visit [www.en-net.org.uk](http://www.en-net.org.uk)

<sup>1</sup> An investigation of anthropometric training by NGOs, Naomi Tilley, Field Exchange Issue 32, January 2008

<sup>2</sup> Training Course on Child Growth Assessment, WHO Child Growth Standards, B Measuring a Child's Growth, WHO Department of Nutrition for Health and Development





A cooking demonstration in Dagahaley

# Fresh food vouchers for refugees in Kenya

By Lani Trenouth, Jude Powel and Silke Pietzsch



Lani Trenouth and Jude Powel were the ACF Food Security and Livelihood programme managers who implemented the programme in Dadaab.



Silke Pietzsch is the Food Security & Livelihood Advisor for ACF-USA, supporting the Kenya mission.

Special thanks go to Sophia Dunn (Consultant) and the ACF Dadaab team for the implementation of the programme. The funding support of the French government is gratefully acknowledged.

*This article outlines an intervention by ACF in Dadaab to improve the nutritional intake and dietary diversity of the refugee population of Dadaab, Kenya, through a complementary food voucher scheme targeted at malnourished children.*

The town of Dadaab in North Eastern Kenya is home to three refugee camps, Hagadera, Dagahaley and Ifo, together hosting over 240,000<sup>1</sup> people. The camps were established in mid-1992 after the closure of the Liboi camp, which was too close to the Kenya/Somali border to ensure adequate security for the refugees. The current camps host refugee communities from various countries, i.e. Somalia, Ethiopia, Democratic Republic of the Congo (DRC) and Sudan, but the Somali population is the biggest in numbers. Due to ongoing insecurity in Somalia, regular influx into the camps has continued, with the population increasing at an average rate of 5000 per month during 2008.

The three camps are managed by the United Nations High Commission for Refugees (UNHCR). Food is provided by the World Food Programme (WFP) as a general dry ration, comprised of cereal, legumes, oil and sugar. Currently the ration provided to all residents does not include fresh foods, such as vegetables or fruit, and many residents have little access to food beyond that which is provided. Each of the camps has a market where resident vendors sell a variety of items, including fresh foods. However, since residents are prohibited from employment, their ability to access these foods is closely related to the limited external support they get from remittances or through the sale of part of the general food ration.

Malnutrition rates have been high in the camps (22% global acute malnutrition, 4.5% severe acute malnutrition (2006))<sup>2</sup> but through concerted inter-agency action, had fallen considerably to an average of 14.7% GAM and 2.9% SAM for the three camps by June 2007<sup>3</sup>. Lack of nutritional diversity was identified as an ongoing underlying cause of malnutrition. To increase the consumption of nutritious fresh foods by the refugee population, a voucher programme was implemented by Action Against Hunger USA (ACF - USA) between September 2007 and April 2009, funded by the French Government.

## Programme objectives

The programme targeted children 6 months to under five years of age enrolled in GTZ (Gesellschaft fuer technische Zusammenarbeit) and International Rescue Committee (IRC) selective feeding programmes<sup>4</sup>. It provided their caregiver with vouchers worth 600KSh per month to enable them to buy fresh vegetables and fruit, milk and eggs in the local market. The programme also aimed to address the sub-optimal practices of primary caregivers in terms of infant and young child feeding practices, balanced diets and good food hygiene. Follow up at household level was carried out to reinforce the health education messages given during the voucher distribution, as well as to observe the households and the children.

Since each camp has functioning markets with vendors specialising in the sale of fresh fruit and vegetables, a local supply<sup>5</sup> was easily accessible to the beneficiaries. In addition, vendors were able to increase their supply if there was a guaranteed demand. The proximity of the markets and the availability of local produce meant that in-kind distributions would be unnecessary and a cash or voucher response would be more appropriate.

By providing a voucher for a defined list of items instead of providing cash, ACF has been able to maintain some control over beneficiary spending and in doing so, has been able to meet the objectives of the programme.

## Targeting

The ACF programme targeted households with malnourished children. To reduce the workload on the small number of ACF staff and avoid duplication, the programme directly targeted a sub-set of GTZ/ IRC nutrition programme beneficiaries. As such, the targeting procedures are dependent on GTZ/IRC staff ability to correctly admit and discharge beneficiaries.

The selection criteria for inclusion in the ACF voucher programme were:

- Households with severely malnourished children enrolled in the GTZ/IRC outpatient therapeutic care programme (OTP).
- Households with moderately malnourished children enrolled in the GTZ/IRC supplementary feeding programme (SFP)
- Households with mothers who have recently been discharged from the GTZ/IRC antenatal care programme and now have a baby at complementary feeding age (6 months).

Clear targeting criteria helped the transparency of the programme as the community understood that the programme targeted malnourished children, with the purpose of improving their nutrition status.

## The voucher process

The value of the voucher was defined based on the 'ideal' complementary<sup>6</sup> food basket and the value of items within it calculated based on market prices (October 2007). This came to 1494 KSh per child per month (see Table 1). However, because the team were planning to target children in selective feeding programmes who would also be receiving ready-to-use therapeutic food, or fortified foods such as Corn Soy Blend (CSB), vouchers to purchase around half of the ideal complementary food basket were distributed. Thus, each child in the nutrition programme was entitled to a voucher worth 600KSh per month that could be divided easily into two 300 KSh vouchers. Once a child was discharged from the selective feeding programme, they were discharged from the voucher scheme.

The voucher approach consisted of three main implementation processes as shown in Figure 1.

1. Voucher distribution to beneficiaries
2. Voucher redemption by beneficiaries at designated fruit and vegetable vendors in the local market.
3. Vendor payment by ACF.

To complement the voucher component, health education was provided to all beneficiaries as part of the voucher distribution process. Health education sessions focused on food hygiene and balanced diet and included cooking demonstrations, as well as information on how to use the voucher with the market vendors.

## Programme implementation

The programme has been implemented by a small team of contracted ACF staff, with significant

<sup>1</sup> UNHCR figures (January, 2009) indicate a population of 247,182 people: Hagadera – 25,388 households (91,634 people), Dagahaley – 20,391 households (71,768 people), Ifo – 24,421 households (83,780 people)

<sup>2</sup> Source of figures: GTZ, 2006

<sup>3</sup> UNHCR interagency annual survey, June 2007: global malnutrition rates of 12.5% (Dag); 10.4% (Hag), 12.9% (Ifo), severe acute malnutrition rates of 2.4% (Dag); 1.0 % (Hag); 1.5% (Ifo).

<sup>4</sup> The GTZ and the IRC are running the supplementary and therapeutic feeding programmes in the Dadaab camps. IRC has only taken on some parts of the programme since 2008.

<sup>5</sup> From Garissa, the next biggest market town with good connections to Nairobi and local vegetable production

<sup>6</sup> Here, complementary food refers to foods, beyond the basic food aid commodities, given to an affected population to diversify their intake and complement the ration.



support from camp based incentive workers and volunteer mothers. In addition, local camp management and the community have appreciated ACF efforts to keep them informed throughout the programme.

To pay the vendors when redeeming the received vouchers, the programme utilised the services of the Kenya Postal Service (PostaPay), who were responsible for cash carrying and distribution to vendors in Dadaab. During the rainy season, some problems were encountered due to poor road conditions which resulted in payment delays to the vendors and affected their supply line in some cases.

## Programme Results

### Beneficiary Numbers

The intended beneficiary numbers and the actually realised numbers differ vastly, mainly due to the continuous high admission rates to the GTZ/IRC nutrition programmes (see Table 2). By February 2009, a total of 63,930 households have received fresh food vouchers, which amounts to 182% of the initially set objective. This was only possible due to the extension of the running contract with the French Government and their commitment to additional funds for the programme.

### Increased household dietary diversity

Dietary diversity is a qualitative measure of food consumption that reflects household access to a wide variety of foods. It is also a proxy indicator of the nutrient adequacy of the diet for individuals<sup>9</sup>. As indicated in Figure 2, before the voucher distribution, most households were reporting consumption of 5-7 food groups (cereal, pulses, oil, miscellaneous, sugar and some vegetables), most of which are provided by WFP. After the voucher distribution, households reported increased consumption of eggs, milk, vegetables and fruit (average of 10 food groups) as intended. This is a positive outcome and shows that it is possible for refugee households to consume a balanced and varied diet.

Information on the percentage of households reporting consumption of each food group is documented in Figures 3 and 4. Comparison of the data from March 2008 to January 2009 shows that even consumption of many of the food groups pre-voucher distribution has reportedly increased. Beneficiaries attributed the change in their consumption to health education and improved availability of fruit and vegetable items in the market.

OTP beneficiaries reported that the cooking demonstrations provided them with increased awareness of new vegetables, especially sukuma wiki (dark green leafy vegetable) and cabbage. Beneficiaries and ACF staff also reported improved knowledge levels on a range of health education topics, although putting certain education messages into practice still causes some challenges. Though the programme concentrated on food hygiene messages, some non-food related messages were also included. Cleaning the compound regularly, washing hands after using the latrine and before food handling, are all messages that beneficiaries reportedly found easy to put into practice.

The benefits of the health education sessions are likely to have been disseminated to non-beneficiaries because many households live within the same compound. Health education sessions given at the health posts are often attended by non-beneficiaries and by GTZ incentive workers too, and hence provide an ideal ground for trickle-out effects to the community.

### Improved coverage of nutrition programmes

The ACF fresh food voucher has clearly been a strong influence on mothers' motivation to bring their children to the GTZ/IRC nutrition programmes. As a result, GTZ staff noted a decreased need for active case finding by community health workers. In previous nutrition surveys (GTZ 2003-

<sup>7</sup> Other fruit and vegetable items could be purchased with the voucher, depending on availability/ seasonality.

<sup>8</sup> The Weaning Babies Programme refers to the number of malnourished infants aged 6-12 months admitted to the selective feeding programme and enrolled on the voucher scheme. This age-group were recognised as especially vulnerable to malnutrition.

<sup>9</sup> Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide, FANTA 2006

| Food Group  | Locally available items | Serving/day | Serving/month | Cost/day | Cost/month | Cost per food group/month |
|---|-------------------------|-------------|---------------|----------|------------|---------------------------|
|   |                         | kg          | kg            | KSh      | KSh        | KSh                       |
| Fruits  | Mango                   | 0.66        | 19.8          | 15       | 297        |                           |
|   | Orange                  | 0.66        | 19.8          | 10       | 198        |                           |
|   | Banana                  | 0.66        | 19.8          | 5        | 99         | 594                       |
| Vegetables  | Sakuma wiki             | 0.2         | 6             | 10       | 60         |                           |
|   | Tomatoes                | 0.065       | 1.95          | 40       | 78         |                           |
|   | Potatoes                | 0.065       | 1.95          | 40       | 78         | 216                       |
| Protein   | Eggs                    | 0.28 eggs   | 8.4 eggs      | 10       | 84         | 84                        |
| Dairy   | Cow's milk              | 1 cup       | 30 cups       | 20       | 600        | 600                       |
| Value of Ideal Complementary Food Basket (Oct 2007) |                         |             |               |          |            | 1494 KSh/month            |

Table 2: Difference between planned and actual voucher beneficiaries

| Beneficiary Group                     | Planned number of households per month | Actual number of households per month (Jan 2009) |
|---------------------------------------|--|--|
| OTP                                   | 170                                    | 250  |
| SFP                                   | 2600                                   | 6000   |
| Weaning Babies Programme <sup>8</sup> | 500                                    | 1500   |
| <b>Total</b>                          | <b>3270</b>                            | <b>7750</b>                                      |

Figure 1: The voucher process

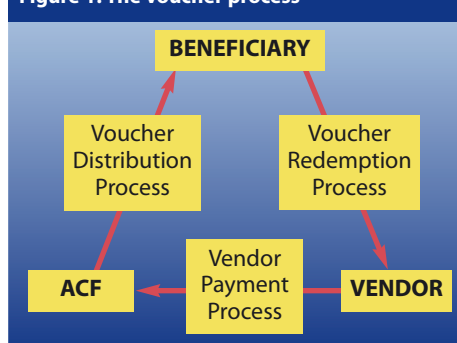


Figure 2: Changes in Household Dietary Diversity Score (HDDS) by number of consumed food groups

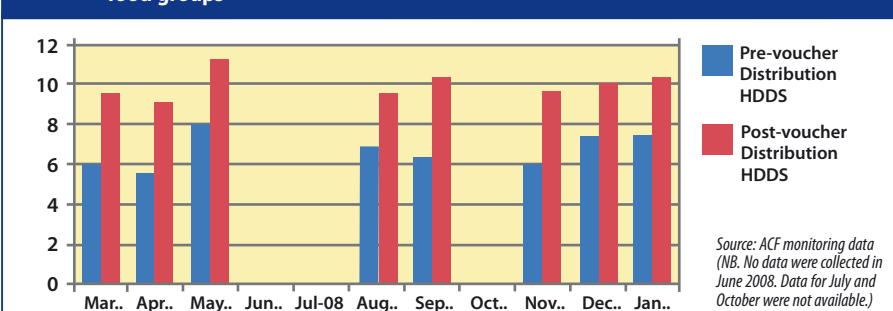


Figure 3: Percentage of households reporting consumption of each food group pre and post voucher distribution (March 2008)

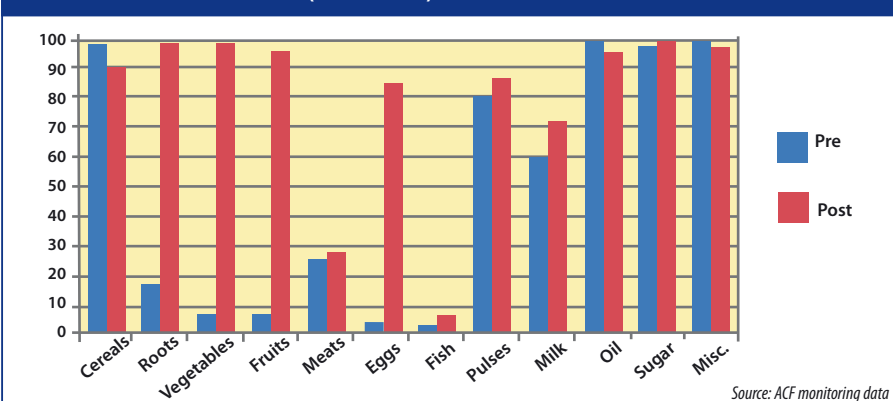
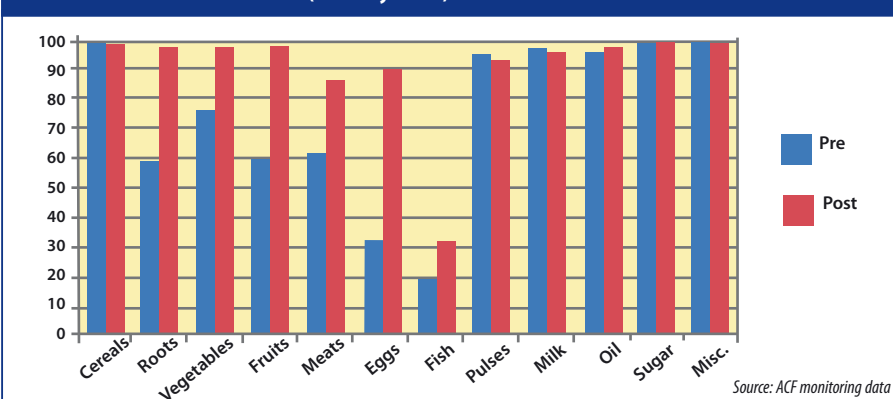


Figure 4: Percentage of households reporting consumption of each food group pre and post voucher distribution (January 2009)







Nutrition education session in Dagahaley

ACF, Dadaab, Kenya, 2008

## Field article

Some of the key informants felt that by targeting malnourished children, the programme was in conflict with prevention messages about eating a balanced diet, i.e. it was "rewarding negative behaviour contributing to malnutrition". If the programme were to be continued, it might be worth looking into the possibility of linking the targeting to a 'positive action', such as growth monitoring, rather than "rewarding" a negative action or benefiting from having a malnourished child. However, informal investigation with the community indicated that the voucher scheme was not an incentive to 'keep' a child malnourished and participating in the programme.

The delays in paying vendors by 3-4 weeks damaged their credit rating with their suppliers. While not having a long term negative consequence, the impact was passed onto programme beneficiaries when some vendors increased their prices to ensure their costs could be covered. A review of the vendor payment system would probably remove this problem.

Considerations for improving the current programme are:

### Programme target groups

The ACF programme has generated much interest from the community and nutrition/health non-governmental organisations and United Nations agencies as a possible tool for preventing anaemia and improving the general health of the refugee population. If the programme is to be continued, there should be a review of the programme objective (and the target groups) in order to meet the specific health needs of the refugee community. Targeting population groups most at risk of anaemia, e.g. under 5's and pregnant women, may be a good place to start. Additionally, other vulnerable groups, like HIV positive individuals and the elderly, could be considered.

### The value of the voucher

Throughout the period of implementation, the value of the ideal food basket has changed, from 1494 KSh in October 2007 to 1600 KSh in January 2009 (range = 1554-1649 KSh), with seasonal price fluctuations in between. Unfortunately the value of the food voucher remained unchanged until January 2009. In addition to the price rises, it became clear that some programme vendors charged more for some items to voucher beneficiaries, due to the delays in payment and vendors wanting to ensure that their costs would be covered. As a result, the voucher no longer provided the intended 50% value of the ideal basket. The main effect of the reduced 'value' of the voucher was to diminish impact on the household's dietary diversity, i.e. it was shorter-lived (on average households had less than 10 days benefit per month from the voucher). After this period, the household's dietary diversity score probably returned to the baseline of five groups provided by WFP. A longer-lasting and more consistent impact may have been achieved had the value of the voucher been better monitored and modified according to market price changes.

### Programme monitoring & sustainability

The ACF programme has addressed a clear, long term need of the refugee population but was never designed to be sustainable. One of the intentions of the programme was to demonstrate that a voucher approach to providing

complementary foods could work. Hence monitoring was a crucial programme component, so that data could be used as proof of success. However, programme monitoring has been difficult for the programme due to several changes to the monitoring system, staff turnover and a review of the monitoring methodology.

## Conclusions

The context provided by the Dadaab camps, with local, functioning markets and a clear need for complementary foods has been an ideal opportunity for ACF to demonstrate that a voucher approach is an appropriate means of providing fresh foods to a refugee population. The programme has also demonstrated this to be a means of addressing the needs of a large population without the necessity for large logistical input. In addition, since the approach utilises the existing market infrastructure, the method helps improve the local economy while providing the required foods to beneficiaries.

The ACF programme has had a range of positive impacts; it improved the dietary diversity of refugee households while also helping to improve the coverage rates of the nutrition programmes. The community has appreciated the voucher approach as it provided them with an increased level of choice about the foods to purchase.

The Dietary Diversity Score has proven to be a good tool to measure and follow up on dietary changes of the targeted population. At the same time, the presentation and practicality of the tool has been useful in focus group discussions and education sessions.

The camp community is dependent on aid organisations to meet their basic needs, and while this programme has also provided items of food assistance to beneficiaries, it has done so in an indirect way that has maintained the dignity of the beneficiaries and should therefore be a preferred approach where feasible.

However, a long term solution needs to be found for the ongoing provision of complementary foods to this refugee population. The ACF programme funding ended in April 2009 and to date, no interest in taking over the programme has been expressed by partners working in the camps. Discussions and advocacy to transfer programme activities to other interested partners are currently ongoing.

For further information, contact: Silke Pietzsch, email: [spietzsch@actionagainsthunger.org](mailto:spietzsch@actionagainsthunger.org)



A voucher trader in Hagadera camp

ACF, Dadaab, Kenya, 2008

2007), SFP coverage rates have been as low as 25.1% (2003) due to lack of food provided to caregivers, non-palatability of CSB and poor quality health services. Admission numbers and coverage rates to the nutrition programmes have since markedly increased, despite an improvement in the overall malnutrition rates in each of the three camps (average of 11.3% GAM and 1.3% SAM for the three camps, August 2008, UNHCR). Increased admissions may partly reflect influx into the camps in late 2008/early 2009. The latest nutrition survey conducted by GTZ (August 2008) indicated SFP coverage rates of 57.8%<sup>10</sup>.

### Improved market supply

Unfortunately, no data were collected about the changes in the business of vendors participating in the programme until November 2008. However, informal evidence from beneficiaries, non-beneficiaries and other key stakeholders point to a number of changes in the market as a result of the ACF programme. The programme intended to improve beneficiary access to fresh food, fruit and vegetables. While this has clearly been the case, an unintended impact of the programme has been a general increase in the availability of fresh fruit and vegetables in the market. The range of fruit and vegetable items in the market has improved, notably the range of leafy green vegetables. Sukuma wiki and cabbage are now regularly available in the market, even though they were unfamiliar vegetables to many Somali refugees before the programme started. Eggs are also available in larger quantities.

### Improved business of programme vendors

The programme has helped improve the business of the programme vendors in camp. ACF data since November 2008 indicates that the programme vendors have increased their business profits by up to 45% and their stock by up to 60%. Their customer base has also risen. This has enabled them to expand their business and take on extra employees. Local milk suppliers have benefited also from the programme. Many of the fruit and vegetable vendors did not sell milk before the ACF programme. In order to meet the list of items for the programme vouchers, some vendors have made informal agreements with milk vendors to sell milk at their shops. In return, the milk suppliers were paid in cash by the programme vendor when beneficiaries elected to purchase milk.

### Further considerations

Two adverse effects of the programme were noted.

<sup>10</sup> Calculated from weight for height median (coverage rate 69.2% by MUAC).



# Interagency IYCF programme in Dadaab, Kenya

By Mary Lung'aho, CARE USA, and Allison Oman, UNHCR

During the period 2006 through the present, CARE, UNHCR, GTZ, IRC, NCCK and other partners have worked in an interagency collaboration (the Dadaab IYCF Team) to provide support for improved infant and young child feeding (IYCF) in the Dadaab Camps.

We would like to congratulate ACF on their efforts to improve the quality and diversity of complementary foods for young children in the Dadaab Camps.

Should the voucher programme continue, we would like to suggest that assessment at admission should be carefully conducted in collaboration with the interagency Dadaab IYCF programme to ensure that mothers of infants under 6 months are encouraged to exclusively breastfeed, that they receive skilled assistance for any difficulties they may experience, and that the voucher programme does not act as an incentive to reduce the period when an infant should exclusively breastfeed (0-6 months).

To support this effort, we would like to further suggest that a name change be considered for the 'Weaning Babies Programme'. While the term 'weaning' appears to be used by the Dadaab voucher programme to refer to children during the period of complementary feeding, weaning can also be taken to mean the 'cessation of breastfeeding'. Breastmilk continues to contribute over half a 6-12 month olds nutrient needs, and one-third of energy needs in a 1-2 year old – in many difficult situations, breastmilk may be amongst the best quality foods that a child receives. To stress the importance of the addition of complementary foods rather than the process of stopping breastfeeding, the programme might be renamed to reflect this (e.g. Programme for Complementary Feeding of Young Children, Complementary Feeding Children's Programme).

The authors mention tracking household dietary diversity using 10 food groups. We would like to recommend that the collection of data on dietary diversity also provides an opportunity to examine the improvement IYCF practices using the 2008 interagency (WHO, UNICEF, IFPRI, UC Davis, AED/FANTA and USAID) IYCF indicators. This would allow comparison of the results of this programme with the data collected on IYCF practices during the annual nutrition survey in Dadaab, as well as with data on IYCF practices in other camps and settings.

The indicator 'minimum dietary diversity' looks at the proportion of children 6-24 months who receive foods from 4 or more food groups (the 7 food groups defined for the tabulation of the complementary feeding indicators are: grains, roots and tubers; legumes and nuts; dairy products (milk, yogurt, cheese); flesh foods (meat, fish, poultry and liver/organ meats); eggs; vitamin-A rich fruits and vegetables; other fruits and vegetables. Consumption of any amount of food from each food group is sufficient to 'count' (i.e. there is no minimum quantity, except if a food item is used only as a condiment).

The cut-off of at least 4 of the 7 groups was selected because it is associated with better quality diets for both breastfed and non-breastfed children. Consumption of foods from at least 4 groups on the previous day would mean that, in most populations, the child had a high likelihood of consuming at least one animal-source food and at least one fruit or vegetable that day, in addition to a staple food (grain, root or tuber).

While financial shortfalls are often a reality, we would like to support the idea that in the Dadaab refugee camp setting, all children 6-24 months would benefit from access to additional complementary foods. There is no food in the current ration basket that fully addresses the nutrient needs and food habits of this group, though UNHCR and WFP are working to identify additional foods appropriate for this group as a parallel programme to the general ration. The yearly nutritional surveys in the camps show that the 6-24m age group has the highest rates of global acute malnutrition, iron-deficiency anaemia and stunting. There is now compelling evidence that the consumption of animal proteins in addition to required nutrients can prevent and reverse the effects of stunting on this age group. There are no animal protein foods provided in the general ration, and so these vouchers represent one avenue of providing these.

In terms of sustainability, it is not realistic to suggest that the food voucher programme could ever be fully sustainable since it is a 'give-away' programme. UNHCR will seek support from donors (such as the French Government who were generous with the above programme) in order to continue the scheme in 2009 and beyond.

For more information on the Dadaab IYCF programme, contact: Mary Lung'aho, email: mary@nutritionpolicypractice.org or Allison Oman, email: OMAN@unhcr.org

Indicators for Assessing Infant and Young Child Feeding Practices. Part 1 Definitions. Conclusions of a consensus meeting held 6-8 November 2007 in Washington, DC, USA 2008 Published by World Health Organisation. Available to download at [www.ifpri.org/pubs/cp/childfeeding.asp](http://www.ifpri.org/pubs/cp/childfeeding.asp) or from [www.who.int](http://www.who.int) and search in 'publications'

UNICEF, Myanmar, 2008



A mother and her baby in a temporary shelter following Cyclone Nargis

## Evaluation of regional IFE workshop

Summary of evaluation report<sup>1</sup>

An evaluation was undertaken by the Emergency Nutrition Network (ENN) to determine the impact of a regional workshop on infant and young child feeding in emergencies (IFE), held in March 2008 in Bali, Indonesia<sup>2</sup>. The workshop was a joint initiative between the IFE Core Group, UNICEF and MOH Indonesia and funded by the Inter-Agency Standing Committee (IASC) Nutrition Cluster and IBFAN-GIFA<sup>3</sup>.

Key outputs of the workshop were country/territory action plans, a model joint statement on IFE, and a pledge for action<sup>4</sup> agreed by all individuals attending.

### The objectives of the evaluation were:

- To identify how the workshop has contributed to work on IFE in countries in the Asia region.
- To identify any further areas of concern/supports required by practitioners to facilitate optimal operations in the area of IFE.
- To provide a mechanism for participants feedback for future workshop development on IFE.

Responses were solicited in this evaluation in relation to progress on specific goals agreed in country action plans. Two major emergencies occurred in the region since the workshop took place, Cyclone Nargis in Myanmar and the Sichuan Earthquake in China. Feedback on the impact of the workshop on IFE response to these specific emergencies was also sought, and a detailed analysis undertaken of media reports on IFE released during both responses.

Contact details were identified from participant lists. Participants were contacted with a questionnaire by email, with follow-up phone interviews. The response rate was 30% with fourteen countries represented.

### Key findings

Key progress reported by participants included:

**Policy:** The majority of countries have now either completed or are planning to complete national policies on IFE (or are incorporating IFE into the national nutrition policies on Infant and

<sup>1</sup> Full evaluation report available at [www.enonline.net](http://www.enonline.net) in Resources section, or email: [marie@enonline.net](mailto:marie@enonline.net)

<sup>2</sup> Regional IFE workshop in Bali. Field Exchange, Issue No 34, October 2008. p37. <http://fex.enonline.net/34/regional.aspx>

<sup>3</sup> International Baby Food Action Network – Geneva Infant Feeding Association

<sup>4</sup> See Annexes 1,2 and 3 of Bali workshop report. Making it Happen. Proceedings of a regional strategy workshop. March 2008. ENN, UNICEF, IASC. Nutrition Cluster, IBFAN-GIFA.



Young Child Feeding (IYCF)). Three countries have completed or planning to complete a policy on managing donations of breast-milk substitutes (BMS).

**Training:** Training of staff was completed in one country, in progress in seven and planned in another four countries. Feedback suggested rolling out training on IFE via:

- Incorporate into all routine health and nutrition programmes.
- Incorporate IYCF and breastfeeding into all appropriate disciplines of health staff training (from universities to pre-service training).
- All emergency preparedness plans and policies to incorporate an element of IYCF. Constraints to training included lack of appropriately skilled staff with sufficient expertise, and poorly accessible donor funds, especially in emergency preparedness.

**Co-ordination:** This was a key constraint identified in the Bali workshop and the majority of countries have nominated an IFE co-ordinator (or body). Regarding implementation of the cluster approach, four out of five countries had completed or are progressing with this action point; UNICEF and Ministry of Health for that country were identified as those bodies who should lead co-ordination activities.

**Communication:** Developing a media/communication strategy occurred/is currently underway in most countries, although some participants indicated more technical support in this area would be worthwhile.

**Emergency preparedness:** Pre-emergency planning and training activities are essential but seen as challenging actions to achieve as funding is considered "not easily available" from donors.

**Networking:** Participants valued the resources shared at the workshop (the Operational Guidance on IFE and Resource CDs, in particular), the opportunity to network with peers, donors and experts in this domain. Representation of several representatives from each country facilitated the development of technical 'working groups' upon return to work. Thirteen from 21 respondents stayed in touch with participants from other countries.

Over 80% of responses indicated that a workshop was considered the best approach for people to start or continue working in the area of IFE. Some input into the organisation and development of the workshop by relevant personnel in key agencies (at field office level) may infer greater support (via a sense of greater ownership for progress) of action post-workshop.

### Supports for action

Supports identified that would greatly facilitate action in IFE if available, included:

#### A strong lead agency

- i) to provide follow-up support after the workshop
- ii) to facilitate co-ordination
- iii) to facilitate training
- iv) to recognise expertise available and use it when required.

#### Funding for activities such as:

- i) Translation of IFE resources into other working languages

- ii) training of more health professionals in IYCF to increase technical expertise (especially as emergency preparedness)
- iii) printing and dissemination of messages /media strategy rollout
- iv) adequate budgeting to include supportive supervision and monitoring activities.

#### More involvement of international expertise

For example, human resources for implementation and monitoring of IFE activities, technical support (capacity building) in developing a Media Strategy (messages and promotion).

#### Networking

Consider a website for the group (highlighting annual achievements/progress on IFE, facilitating networking/discussion groups) or a follow-up forum to facilitate more exchange to learn from other countries.

#### Register of skilled/trained personnel

Availability of a register of appropriately skilled people at both country and regional level that could be called upon in an emergency by agencies.

#### Regional events

Two major emergencies occurred in the region since the workshop took place - Cyclone Nargis in Myanmar and the Sichuan Earthquake in China. Responses from countries which supported the Myanmar government and agencies included Afghanistan, Indonesia, Bangladesh, Sri Lanka and the Philippines. Responses from countries which supported the Chinese government and agencies included Indonesia, Nepal, Sri Lanka, Taiwan. UNICEF Afghanistan was also involved in assisting in India and Bangladesh flooding emergencies. Examples of impact of the workshop included:

- Regional orientation of high-level emergency teams on IFE prior to their departure to the affected country (Sri Lankan support to Myanmar cyclone).
- In Myanmar, the workshop impacted through "good co-ordination and networking system of the Nutrition Cluster". The model joint statement on IFE produced at the regional workshop was used as the basis for the interagency joint statement released.
- In Bangladesh, the workshop generated a network within the country and regionally/internationally which supported IFE activities.
- In China, the resources from the workshop supported activities after the earthquake.

A detailed analysis of media reports revealed that IFE messages were commonly communicated via the media. Some of the common and pertinent messages in media reports were: babies are vulnerable, that women breastfeed in emergencies but breastfeeding is a sign of weakness, and providing infant formula will save babies. Messages rarely reported in the media included that artificial feeding leads to diarrhoea and death in emergencies and that breastfeeding is a sign of resilience and protects infants in emergencies. This analysis suggests that current reporting patterns of the media may encourage the inappropriate donation and distribution of infant formula and powdered milk in emergencies, and so contribute to increased morbidity and mortality in infants and young children.

## Recommendations

Recommendations made by participants to improve capacity to respond on IFE included:

### Resources

- Support from decision makers (organisational management/funding bodies) for resource allocation (especially human resources and funding) to develop, roll-out and monitor IFE progress.
- Further development of resources e.g. facilitating the development of 'field manuals' for training local health staff/community health workers, particularly in local/other languages (time/funds were key constraints in developing these).
- More strategies on IFE in countries where bottle-feeding is currently the more common choice of feeding for mothers.
- Development of and consensus to commit to a 'Pledge' or statement of action should be considered in other countries/at future workshops.

### Workshop

- The emphasis of the workshop on learning via case studies and field experiences ('practical' scenarios) should continue.
- Include practical skills/orientation in developing funding strategies (e.g. multi-agency, etc.) as a workshop activity.
- Representation of several participants from each country (country 'teams' were identified to attend with mixed representation decided by country) enables progress on action and is supported as an approach.

### Co-ordination

- Continued emphasis on supporting breast feeding as choice for all mothers, even in non-emergency situations.
- A focal person on IFE should be nominated by each country to provide support in co-ordinating national and regional collaboration/networking on IFE.
- Development and dissemination of a register of skilled personnel in IFE available for training/advice in and between countries.
- Increased networking via email forums/internet (e.g. ENN website/online working groups).
- Increased dissemination of progress on IFE (results in increasing motivation and networking for local advice/strategies between peers).

### Media and communication

- Aid organisations should provide the media and their supporters with good information on IFE including the protective role of breastfeeding, the dangers of artificial feeding and unsolicited donations of milk products and the need to support breastfeeding women, target the distribution of infant formula and support the carers of artificially fed babies.
- Aid agencies should avoid presenting themselves as saviours of infants but instead present mothers as partners in provision of aid to infants and young children.
- Media reports to present breastfeeding as a sign of strength not vulnerability and breast-feeding mothers as resilient and with the capacity to protect their infants if provided with support.
- Explicitly state that donation of infant formula is not needed.





Dave Snyder, Zambia, 2004

# Impact of nutritional supplementation amongst PLHIV in Zambia

By Daphne Williams



Daphne Williams is currently Technical Advisor HIV and AIDS with Catholic Relief Services where she has worked for the past 2 years.

The author wishes to thank Cecilia Adalla, James Campbell, Elizabeth Jere, Linda Lovick and Shannon Senefeld for reviewing and contributing to this article. She would also like to acknowledge the work of CRS Zambia, SUCCESS staff and its partners in their continued efforts in HIV.

*This article describes the impact of nutritional supplementation on people living with HIV/AIDS, determined through a field study by CRS*

The Catholic Relief Services (CRS) Zambia Scaling-Up Community Care to Enhance Social Safety-nets (SUCCESS) project is based on a holistic approach to HIV care. It includes home-based care, community based counselling and testing, palliative care, the prevention of mother to child transmission of HIV, as well as targeted nutrition. From 2005 to 2006, CRS embarked on a targeted evaluation of the SUCCESS project's nutritional supplementation efforts<sup>1</sup>.

At the time of the study and to date, there is little information on the impact of nutritional supplementation on the lives of people living with HIV (PLHIV) pre-antiretroviral treatment (ART) in high prevalence settings. This study built upon anecdotal project evidence that as a result of nutritional supplementation, PLHIV gained weight and regained some degree of previous activity levels. In many instances, it was observed that individuals previously bed bound were able to regain enough strength to re-enter family activity. This study hypothesised that chronically ill PLHIV, not on ART, who received nutritional support would experience multiple positive impacts as a result of the nutritional supplementation.

## Method

A quasi-experimental design was used to examine the impact of nutritional supplementation on chronically ill PLHIV, not yet on ART, over a 6 month period. The design, vetted and approved by CRS and USAID, was approved by the Zambian Internal Ethics Review Board. The evaluation occurred in three dioceses in the implementation catchment areas of the Catholic diocese of Solwezi, Mongu and Monze. The study design had three arms:

- Home-based care (HBC) clients living with HIV who received high energy protein supplements (HEPS) and vegetable oil. (Solwezi)
- HBC clients living with HIV who received bulgur wheat or sorghum and common beans or peas. (Mongu)
- People living with HIV who received no food aid or nutritional support. (Monze)

The nutritional supplementation in Solwezi, in the Northwest province, was purchased locally using the President's Emergency Plan for AIDS Relief (PEPFAR) funds from USAID. In Mongu, the Western province, food was provided by USAID's Food for Peace programme through the Consortium for Southern Africa Food Security Emergency (C-SAFE), implemented by CRS.

The study sites were selected based on general similarities, including rural areas with mid-sized urban centres, topography, cultural background, levels of food insecurity, an existing long term project presence in Mongu and Solwezi and the expectation of expanding SUCCESS to Monze. However, the HIV prevalence in the areas varied somewhat at the time of the study. Solwezi had the second lowest HIV prevalence in the country, an estimated nine percent. Mongu's HIV prevalence was estimated at thirteen percent and Monze had the third highest prevalence in Zambia, eighteen percent. Participants for this study were solicited from current clients of the SUCCESS HBC programmes in Solwezi and Mongu. The HBC programme operating in the diocese of Monze was used as a control, as it did not have a food supplement programme. All of the HBC programmes offered similar services and activities. Initial eligibility for the HBC programmes was decided by clinical determination and referral. To be eligible to participate in the study, the HBC clients needed to fulfil all the following criteria:

- A registered HBC client (i.e. chronically ill) in Solwezi, Mongu or Monze
- Food insecure as determined by SUCCESS programme screening tool
- New to HBC nutritional supplementation component (cases)
- Not receiving food aid from another source (controls)
- 18 years old or older
- Not on ART, and
- Confirmed HIV status (by HBC volunteers).

## HBC programme design

The HBC programmes followed very similar structures. In each programme, community members identified individuals as potential volunteers. After completion of HBC training, the volunteers visited HBC clients weekly or more, depending on level of illness. The HBC volunteers provided their clients with basic psychosocial and pastoral support as well as general health and prevention education. Individual client care plans were developed by nurses and followed by volunteers. Many of these care plans included directly observed treatment support (DOTS) for tuberculosis, clinical and social service referrals for clients and/or family members, care and support for orphans and vulnerable children, nutritional counselling and access to HIV voluntary and confidential counselling and testing.

The study utilised a written questionnaire developed in Lusaka, Zambia in close collaboration with representatives from partner implementers in Solwezi and Mongu. The questionnaire was composed of questions tested and used by CRS, C-SAFE, World Food Programme, and researchers from Johns Hopkins and other universities. The final survey instrument was written in English, but administered in the appropriate local language and back translated. The survey instrument targeted both the household and individual HBC client levels and focused on thirteen thematic sections including household demographics, coping strategies, household receipt and use of food aid, current medical treatment, anthropometric information, and quality of life measures.

<sup>1</sup> The findings from this study have been presented at the American Evaluation Association 2008 Conference and the 2008 International AIDS Society, Mexico City. A complete write up of the 'CRS SUCCESS Palliative Care Nutritional Supplementation Targeted Evaluation' can be found at <http://crs.org/publications/list.cfm?sector=6>.



Sean Sprague, Zambia, 2003

Food distribution by CRS as part of HBC





Sean Sprague, Zambia, 2003

### Study participants

More than half of the HBC clients interviewed at baseline were from Monze, which ensured sufficient participants with similar food insecurity as in Solwezi and Mongu. Of the 931 participants identified in Monze, only 684 met the food insecurity criteria required for participation in the study, of which 168 were removed because they either received food aid or were on ART. At baseline, there were 516 participants from Monze, 413 from Mongu and 380 from Solwezi giving a total of 1,309 study participants.

At the end of the study, there were 911 HBC clients still participating. The reasons given for those who had not continued participation in the end line questionnaire included, among others, death, relocation and programme discharge. Of the remaining HBC participating clients, 578 client records were not included in the analysis because the clients started on ART or had unknown or HIV-negative test results. The final sample size consisted of 81 clients in Mongu, 124 in Solwezi and 123 in Monze forming a total of 328. Women who self-reported as pregnant or lactating, though included in the final overall analysis, were not included in the analysis of anthropometric measures.

### Results

The participants in this study were similar in many ways. At least 60% were women and more than half were heads of households. The average household size ranged from 6.58 to 7.48. However, in Solwezi, clients were on average younger and more likely to be married than the clients in Mongu or Monze. In addition, the sources of income were quite diverse within and across dioceses. In terms of income, the most frequently reported earnings were less than the equivalent of 11 United States Dollars per month, across and within dioceses.

In the intervention sites, survey questions were included to determine the acceptability of the nutritional supplements as well as to verify use of the supplements. In Solwezi, where the monthly ration consisted of HEPS and oil, 93.9% of the clients surveyed reported eating HEPS in the 30 days prior to the survey. In Mongu, the ration of beans and bulgur wheat (or sorghum and peas) was reported to be eaten in the previous 30 days by 91.1% of respondents. However, the study found no significant change in the food consumption score, a proxy for the diversity and nutritional quality of the

household diet. In Mongu and Solwezi, when combined as one intervention arm, there was a statistical change between baseline and end line food consumption score. However, analysis determined no correlation between food consumption scores and gender, age, self-reported health status or household size.

The study also measured coping strategies using the Coping Strategy Index (CSI), which measures the frequency and severity of household strategies to cope with food insecurity over the previous 30 days. The CSI is an inverse measure, meaning the higher the score, the more frequent and severe the coping strategies. For this study, there was a maximum CSI score of 177.5 and minimum of 35.5. At baseline, the mean score for Mongu was 87.11, and 81.22 and 79.32 for Solwezi and Monze, respectively. At end line, the mean scores were significantly lower in Solwezi ( $p < 0.05$ ) and Mongu ( $p < 0.001$ ). In Monze, the mean CSI score was significantly higher ( $p < 0.001$ ), which indicates more frequent and severe coping strategies used in Monze.

The study used the Eastern Cooperative Oncology Group (ECOG) scale, which measures performance status on a 5 point scale, ranging from '0, fully active, able to carry out all pre-disease activities without restriction'; to '4, completely disabled, cannot carry on any self-care, totally confined to bed or chair.' ECOG analysis examined the overall gain for all clients. The score was calculated by taking the difference between the end line and baseline ECOG scores. The majority of clients ranked between 2 and 3 on the ECOG scale and were, therefore, capable of self care and ambulatory, but were unable to work. Twice as many clients in Monze, the control arm, reported worsening performance during the study period. While both intervention sites reported increases in performance, the difference in the mean gain between the sites was not significant.

The anthropometric measures of Body Mass Index (BMI) and Middle Upper Arm Circumference (MUAC) were taken at baseline and end line. At baseline, the three study groups were not significantly different from each other in terms of mean BMI or MUAC. The mean end line BMI was not significantly different from baseline. However, there were slight increases in BMI in Solwezi and Mongu and a slight decrease in Monze from baseline to end line, although these changes were not statistically significant. With regard to MUAC values, there were significant improvements, with statistically significant changes in the combined intervention arms when compared to the control arm ( $p < 0.001$ ).

### Conclusions

This evaluation showed that even modest nutritional supplementation can improve the nutritional status of PLHIV in insecure households. Furthermore, nutrition support can improve mental and physical health, reduce the need for support and improve individual ability to carry out daily activities - essentially improving the quality of life for PLHIV not yet on ART. In general, MUAC measurements increased in clients who received nutritional supplements, while those who did not receive supplements saw decreasing MUAC measurements. Quality of life measurements saw improvements for the intervention clients. Additionally, the intervention sites saw significant decreases in AIDS related symptoms and need for caregiver

support. The evaluation findings support the following recommendations:

- Increase funding and support for food and nutrition supplements to food insecure PLHIV.
- Further study the impact of nutritional supplements using larger sample sizes.
- Further consultation needed on an appropriate and feasible combination of assessment tools for wide scale monitoring and evaluation.

### Update

Since the study, Mongu has not participated in food distribution, but CRS continues to support the HBC programme. Monze did not become a programme site. The SUCCESS program plans to expand its nutritional assistance to 6 dioceses which cover nearly five Zambian provinces.

Currently, SUCCESS implements a therapeutic feeding programme targeting 11 hospices and selected parishes from Solwezi and Chipata Diocese HBC programmes. The new programmes were designed to comply with the U.S. government's release of policy guidance for the use of emergency plan funds to address food and nutrition needs. The policy guidance restricts food support to specifically identified target populations based on WHO criteria and guidelines. SUCCESS now procures ready-to-use therapeutic food (RUTF), a high energy peanut-butter-like product, and HEPS for treatment of people in palliative care programmes with severe or moderate acute malnutrition. These foods are provided to clients according to clear entry and exit anthropometric criteria and are not designed as long term food support. SUCCESS no longer provides other food products through the palliative care programme, such as those used in the earlier study.

In 2008, SUCCESS embarked on a pilot project that utilizes the 'Food By Prescription' approach to target clients with clinical malnutrition. This approach has 'medicalised' food by distributing it to clients in small daily 'doses' dispensed in clinic settings. The pilot project integrates malnutrition assessment and RUTF and HEPS distribution into nine large HIV treatment clinics and their respective decentralised clinic sites. Clients collect the food as they collect their monthly HIV medication. The pilot project will examine how this model can be replicated in the Zambian context.

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For more information about this or other CRS evaluations, please visit the CRS website at [www.crs.org](http://www.crs.org) or email [HIVunit@crs.org](mailto:HIVunit@crs.org)

Dave Snyder, Zambia, 2004





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| <b>No. of HQ staff</b>                        | <b>140+</b>                              |
| <b>No of staff world-wide (25 countries):</b> | <b>600+ staff</b>                        |



Food aid distributed by DanChurchAid partner in Burma

DanChurchAid, Burma, 2007



The ENN were meant to interview Erik Johnson, humanitarian coordinator for DanChurchAid (DCA) for this issue's agency profile slot. However, a last minute trip to Gaza by Erik meant that the interview couldn't take place. Nevertheless, Erik dutifully responded to all of the questions we had sent him in advance of the interview by email. His responses were so comprehensive, informative and interesting that we decided to forget the interview and simply edit his replies into the article below.

Before joining DCA, Erik worked for 5 years in West Africa with IRC, Merlin, and Oxfam, and another 18 months in the Palestinian Territories with Oxfam. He joined DCA as Humanitarian Response Coordinator with a global responsibility for DCA's emergency response work. His current role is to supervise the small team of Humanitarian Advisors in headquarters (HQ), and ensure that their inputs on humanitarian responses are coordinated across the organisation, including staff in HQ, the field, and DCA partners. "In the humanitarian team we play a pretty diverse set of roles, but overall we're there to ensure the quality of DCA's emergency response work".

DCA was founded in 1922 by the Danish Churches in order to respond to the poor communities in Europe still suffering in the wake of the First World War. DCA has since evolved into a professional relief and development organisation with five programme types, one of which is humanitarian relief. "Though we're non-missionary and perhaps 95% of our staff are not Christian (we haven't counted!), our history, values, and a lot of our supporters in Denmark are rooted in the Danish Lutheran Church, and many of our implementing partners are church councils or related agencies". DCA funding primarily comes from three sources: Danida (the Danish foreign ministry), the European Union (Europeaid and ECHO), and private donors in Denmark.

Although not certain, Erik thinks that DCA has been involved in nutrition for many years, although he wouldn't hazard a guess at when and where it started. Like many smaller Northern European non-governmental organisations (NGOs), DCA has typically been involved in disaster responses where it had an existing presence and partnerships and where needs arose. "As DCA has a general focus on food security and more recently on food crisis

response, it has naturally meant that we've supported nutrition interventions as well".

As a non-specialised agency that doesn't usually support any health activities outside of HIV/AIDS, DCA typically supports supplementary feeding programmes (SFPs), although Erik has also seen some therapeutic feeding centres and community therapeutic care programmes run by DCA partners.

According to Erik, DCA has evolved organically. "Often DCA's partners are the only ones present in their areas of operation, which tend to be the most marginalized and remote areas of any given disaster-affected population, whilst the larger agencies congregate around aid hubs and more heavily populated areas. You could therefore say that DCA have often gotten into nutrition work 'by default,' because there was simply no one else to do it".

"As DCA is usually a non-implementing agency that works primarily through Southern partners, including those of the Action by Churches Together (ACT) network, it's tough to generalise. Right now, DCA are supporting a partner in the Gaza strip, the Near East Council of Churches (NECC), who are a highly competent medical partner that has long been addressing child nutrition as a component of their Maternal and Child Health programme with micronutrient supplements and nutritional counselling. On an assessment in 2006, we identified that these strategies were no longer sufficient due to the simple lack of household food as a result of the economic blockade of Gaza, and together with NECC started a more comprehensive project to address child nutrition, including an SFP for under 5's."

Erik explained that he didn't think DCA were implementing any nutrition interventions directly at the moment. "It's all through partners. It's a bit difficult to say, off the top of my head, where we're doing nutrition around the world; even though we're a relatively small agency, we still work in over 25 countries and even I don't always have an overview of everything that's going on! But I do know about the project in Gaza, as well as SFP programmes in Ethiopia, Myanmar, and Uganda, to name a few. We're also hoping to start school feeding programmes in a couple of the countries where we work in Southern Africa".

Erik also explained that because DCA emergency response is typically built on the back of their development programmes in Food Security, they are trying to develop DCA and partners' competencies in that grey zone between relief and development, where DCA believes its Southern partners excel most.

"Because our implementing partners are locally based, they tend to know the local contexts to a much better degree than larger, international NGOs whose engagements tend to be shorter term. This also brings the advantage of being able to identify and assist difficult-to-reach, 'gap' populations that are often overlooked by others. I'm particularly proud of DCA's role with these people, and knowing that DCA and its partners have really made a crucial difference in the lives of children which otherwise never would have received assistance".

Erik evaluated the intervention of DCA and its ACT partners' in response to the food crisis in Malawi in 2005. He found that DCA's partners were supporting both SFP and therapeutic feeding programmes that were entirely off the radar of the larger agencies, including the World Food Programme who was running an emergency operation (EMOP) at the time.

"For me, this represents the two sides of the story at once; whilst I was proud of the work that our partners were doing, I was disappointed that it wasn't better coordinated with the WFP and other INGOs' efforts. This, unfortunately, is sometimes the case, the national agencies we support inhabit one world, whilst the INGOs and the United Nations and Red Cross agencies inhabit another. As a result, our national partners don't get exposure to the technical expertise of the international organisations, and the international agencies don't get the essential knowledge that our partners possess, nor are their interventions typically as sustainable. This is where DCA can often play an important role, in bridging the gap between the two worlds."

DCA do not have any nutrition staff. Erik explained "this is another challenge for an agency the size of ours, with about 130 staff in HQ and over 600 hundred staff in the field. Our humanitarian department has 6 staff, but though we each have our areas of competence and experience, we're basically all generalists. We have to be, as we need to be able to assure the quality of interventions across all the sectors where our partners work. It's also for this reason that we tend to focus more on general ration distribution than more technically complicated nutrition work, though in many cases, if DCA's partners weren't there to intervene, no one else would. Whenever we get involved in these types of interventions, we always ensure that the required technical competence is present at the partner level, or else we build it into the budget or bring in a consultant. But I'll be honest – this is a challenge! It's one of the areas where an organization like ENN can help us ensure our partners' quality".



In response to a question about future plans and directions for DCA, Erik replied that “DCA is currently making investments to increase capacity and competence in food crisis response, and an increased focus on our SFPs is definitely part of this. In addition, we’re also making efforts to ensure that humanitarian reform doesn’t pass us by, and are therefore spending more effort to ensure that our partners’ interventions are coordinated in the food and nutrition clusters, where they operate”.

“We also hope to play a role in bridging that gap between the national and international organisations’ responses in nutrition work. We believe that southern organisations will play an increasingly important role in humanitarian response in the coming years”.

The ENN asked Erik to say something about the ‘culture’ of DCA and any ways in which it is unique. His response was this.

“When I worked at Oxfam GB I remember that many referred to it as, ‘the thinking person’s NGO’. Oxfam’s got nothing on DCA! This was definitely a cultural difference for me – an American – to get used to at DCA; an acceptance of the Danish tendency to examine every aspect of a problem thoroughly, from a well-documented analytical framework, before acting. On the positive side, it means that it’s an organisation of tremendous conviction, and with a very strong linkage between what it believes, says, and does. But sometimes for a former field guy like me, I just want to chuck all the policies and get on with the work! But in the end I think the two approaches – practical and theoretical – complement each other well at DCA. That and its commitment to working through and supporting national partners are part of what makes DCA unique”.

Finally, the ENN tried to draw Erik out on his views about where emergency nutrition is going and recent developments. He had this to say.

“The fairly recent developments of ready to use therapeutic food and other locally produced nutritional supplements are a huge step forward. I remember using F75 and F100 in Sierra Leone in 2000 – this requires a lot of international procurement that will always be beyond the reach of a national organisation, and national organisations often make up a huge part of the response. I think the trend I’d like to see – other than the bridging of the national / international divide that I spoke of before – is towards more of these types of interventions; locally sustainable, with a focus on longer-term nutrition, instead of just short-term crisis interventions. Here I personally think that school feeding can also play a really important role, and I think that WFP’s new purchase for progress programme – which purchases from small local producers – is a step in the right direction, if we can make it work. But it’s clear that we’ve entered the ‘post food surplus’ era, faster than anyone thought we would, and climate change and population growth mean that the days when American and Canadian grain producers had massive surpluses are long gone”.

This was the first interview by questionnaire that ENN has done for the agency profile section of Field Exchange and, judging by the quality and honesty of the response, it won’t be the last.

Tdh Foundation, Bangladesh, 2008



Growth monitoring in a programme 'target area'

# Food insecurity and child malnutrition in North Bangladesh



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**By Kimon Schneider, Pranab K. Roy and Dr. Hasan**

The authors would like to acknowledge Tdh Foundation's beneficiaries in Kurigram District, Geoffrey Cordell, Tdh Foundation Regional Advisor Protection, Jean-Pierre Papart, Tdh Foundation Resource Person on MCH/N, and Dr. C. Banerjee, Programme Manager Tdh Foundation India.



*This article describes the experiences of a Swiss-based NGO, Tdh Fondation, on maternal and child nutrition programming in Bangladesh, and their observations around the impact of the food price crisis.*

According to a survey released by WFP, UNICEF and the Institute of Public Health Nutrition<sup>1</sup>, one in four households in Bangladesh are food insecure while two million children aged six months to five years are affected by acute wasting (13.5%). Out of those two million, half a million children (3.4%) are suffering from severe wasting<sup>2</sup>. The survey, which was carried out during the harvest season when levels of wasting were likely to be at their lowest, was undertaken throughout the whole country from November 2008 to January 2009 with representative samples collected from the six divisions by area. A total of 10,378 households were surveyed and 4,175 children under five were assessed for their health and nutrition status.

A main reason for undertaking the survey was to assess the impact of the food price increases in Bangladesh in 2008. In Bangladesh the price of rice, the main staple, together with pulses, edible oil and other food commodities, nearly doubled between 2007 and 2008, and the average price of basic commodities is still 20% higher than the level before the price escalation.

The survey found that 58% of households claimed they had insufficient food during the last twelve months. Real household income dropped by 12% between 2005 and 2008. At the end of 2008, food expenditure represented 62% of total household expenditure, 10% higher than the national average of 2005. In order to cope with higher food prices, people have got themselves into a deeper spiral of debt. The survey showed a clear link between malnutrition and household food insecurity. Food insecure households had higher percentages of malnourished children.

Almost half of the surveyed children aged 6-59 months were stunted (48.6%), while 37.4% were underweight. Rural areas presented higher rates of all three types of malnutrition.

Among the causes of malnutrition, the survey identified lack of dietary diversity as a key problem. Almost half of children between 6-24 months did not receive the minimum meal frequency, while two thirds of the same age group did not meet the minimum dietary diversity of four food groups per day.

Poor infant and young child feeding practices are major factors contributing to poor nutrition in Bangladesh. For example, complementary foods are introduced inappropriately and with insufficient dietary diversity.

Recommendations by the survey team underlined the need to strengthen and expand ongoing efforts to promote exclusive breastfeeding for the first six months of life and to educate families about optimal infant and young child feeding practices. Other key recommendations included expanding the social safety net intervention and better targeting of it towards areas where malnutrition and food insecurity are most prevalent. Food assistance interventions should emphasise micronutrient-enriched foods and improved dietary diversity. Furthermore, there should be

provision of micronutrients in the worst affected geographic areas to specific age groups, such as adolescent girls, pregnant women and 6-24 month old children. The survey also recommended expansion of therapeutic and supplementary food interventions for the management of acute malnutrition at both facility and community levels, to take care of the large numbers of acutely malnourished children.

### **Tdh Foundation programmatic experiences**

The programmatic experiences in Bangladesh of Terre des hommes Foundation (Tdh Foundation), a Swiss based child focused organisation, support findings of a "causal relationship" between escalating food prices and the rise in malnutrition, in the children it has been working with in Bangladesh. Furthermore, there are indications that in the areas where Tdh Foundation has been operating with its comprehensive community based approach to Maternal and Child Health and Nutrition (MCH/N), the prevalence of malnutrition is considerably lower than in areas where Tdh Foundation has not been working.

### **Decline in child nutritional status during period of food price inflation**

Tdh Foundation has delivered a MCH/N project for several years in the north of Bangladesh. In 2008, Tdh Foundation started to witness the impact of the food crisis in terms of unusually high numbers of malnourished children. In order to grasp the extent of child malnutrition and its link to the rise in food prices, several quantitative and qualitative assessments were commissioned in Tdh Foundation's working areas.

Working areas consist of target areas and catchment areas. Target areas are identified by baseline data and defined as having particularly poor health related activities and behaviours. The aim in target areas is to focus energies on addressing these needs and to measure the impact of the agency's work in order to be able to improve the interventions. In target areas, work is community focused and covers all households. In the geographically defined catchment areas from which people would normally travel to a particular service, work is primarily facility based, including two Mother and Child Health Centres (MCHC) and Bangladesh's only Specialised Nutrition Unit (SNU). The SNU is a permanent indoor facility where children are discharged at -2SD weight for height and individually followed up at household level.

Tdh Foundation conducted an assessment in several poverty pockets within its catchment area. Here, 921 children aged 1-5 years were measured using mid-upper arm circumference (MUAC) only. Of these, 625 cases were found to be malnourished – 31.5% were moderately malnourished (MUAC  $\geq 12.5$  and  $< 13.5$  cm) and 36.4% were severely malnourished (MUAC  $< 12.5$  cm)<sup>3</sup>. These malnourished children were then measured using weight/height Z-scores (WHO growth standards). Of these, one-third (33.3%) were moderately malnourished and 11.4% severely malnourished. Acknowledging the methodological limitation of switching over from assessing MUAC to measuring weight/ height, the findings show that of the original sample of 921 children aged 1.5 years, 22.6% were moderately wasted and 7.7% were severely wasted.

This severely malnourished rate (7.7%) is high compared with data from between 2006 and early 2008 in Tdh Foundation's MCHC, where the rate of severe wasting amongst children attending the centres was 5%, on average. However, it is recognised that the former population are an in situ population while the latter are a clinic based population so that findings may not be directly comparable. The fact that the national average is 3.4% SAM (WHO growth standards) makes these findings even more alarming.

Another assessment was conducted in one of Tdh Foundation's MCHC. Data over the year were collected and analysed on wasting prevalence of under-5 year old children who visited the centre between January 2006 and January 2009. The assessment was based on the following samples: the first 500 children (newly presenting and already attending) who visited the centre in January and August 2006, 2007 and 2008, respectively, and in January 2009. For each period, wasting (weight/height Z-scores), using WHO growth standards, was assessed. Data for wasting are given in Table 1.

We find that the situation deteriorated sharply between August 2008 and January 2009. In order to improve the power of statistical analysis (reducing degrees of freedom), the sample was divided into two periods – a 'non crisis' period from January 2006 to January 2008, and a 'crisis' period from August 2008 to January 2009. The result indicates that despite the peak of malnutrition observed in August 2006 (for which there is no explanation) the likelihood that the food crisis had an impact on wasting prevalence in under-5 children is very high. The observed difference in wasting

**Table 1: Trends in wasting based on Tdh Foundation centre attendance (2006-2009)**

|              | Wasting |          |        |
|--------------|---------|----------|--------|
|              | Normal  | Moderate | Severe |
| January 2006 | 85.8%   | 9.3%     | 4.9%   |
| August 2006  | 73.6%   | 20.7%    | 5.6%   |
| January 2007 | 84.3%   | 11.1%    | 4.6%   |
| August 2007  | 79.2%   | 15.5%    | 4.9%   |
| January 2008 | 79.5%   | 15.6%    | 4.9%   |
| August 2008  | 72.6%   | 19.3%    | 8.1%   |
| January 2009 | 62.9%   | 22.5%    | 14.7%  |

Note: All figures are calculated using the WHO Growth Standards.

**Table 2: Prevalence of wasting in old and new target areas, Tdh Foundation**

|                            |                      | Wasting |          |        |
|----------------------------|----------------------|---------|----------|--------|
|                            |                      | Normal  | Moderate | Severe |
| Community based prevention | operating since 2004 | 93.5%   | 5.8%     | 0.7%   |
|                            | operating since 2008 | 76.6%   | 17.2%    | 6.2%   |

Note: All figures are calculated using the WHO Growth Standards.

<sup>1</sup> Household Food Security and Nutrition Assessment in Bangladesh, November 2008-January 2009, (WFP, UNICEF, IPHN), March 2009.

<sup>2</sup> Weight-for-height  $< -3$  z score

<sup>3</sup> These differ to the WHO recommended cut-off points, MUAC  $< 11.5$  cm for severe malnutrition (recently updated from MUAC  $< 11$  cm), and MUAC  $\geq 11.5$  and  $< 12.5$  cm for moderate malnutrition.





Street yard drama in a programme 'target area'

Tdh Foundation, Bangladesh, 2008

prevalence is statistically significant ( $p < 0.001$ ). The risk (odds ratio) of wasting is multiplied by 2 (CI 95%: 1.7-2.3), from 19.5% to 32.3%.

## Effective management of child malnutrition

Despite recent improvements, the government of Bangladesh does not provide an appropriate health care infrastructure for its rural population. There is no integrated health service, and until recent years, there has been no centrally driven strategy for ensuring an adequate coverage of appropriate services. This being the case, different development agencies, including Tdh Foundation, do what they can to fill the gap.

Tdh Foundation's MCH/N strategy is based on extensive field experience. It takes three approaches, each designed to supplement and support the other:

- Service provision – leading to improved access to health care.
- Health promotion/community awareness – leading to positive changes in the behaviour of the community and an improved health and nutritional status.
- Securing the support of formal and informal power structures within the community.

The approaches complement each other at both facility and community level. At the facility level, MCHCs diagnose, treat and refer patients. Medicines are dispensed and children are screened and monitored. Children are also immunised, while carers are given advice and provided with health care information. The SNU manages severely malnourished children according to the WHO protocols. Special emphasis is given to the community level where problems are systematically addressed via a wide range of activities including, for example:

- tackling social issues such as early marriage, dowry, illegal divorce, abandonment and the consequences for women headed households in society.
- promoting exclusive breastfeeding and complementary feeding, women's nutrition through supplementary feeding, the importance of safe motherhood, immunisation and neonatal care.
- monthly growth monitoring of children under-2 years of age and six-monthly nutrition screening (weight/height) of children aged 25-60 months, including counselling on health and nutrition behaviours, providing de-worming tablets and referring severely malnourished cases to our SNU
- delivering messages using a variety of means, such as folk song, street yard drama, pictures and practical demonstration (e.g. cooking of complementary food, oral rehydration salts (ORS) preparation, and hand washing), individual counselling of women, men, adolescents and children, home visits and follow-up visits
- curative services from satellite and static clinics, including treatment of minor ailments and ante-natal and post-natal care. Complicated cases are referred to government institutions and/or to the MCHC and SNU.
- promoting the take up and use of tube wells and latrines, reflecting the centrality of a water, sanitation and hygiene (WASH) programme approach.

## Community based role in dealing with increased food prices

When Tdh Foundation launched its work in the target areas, there were many complex MCH/N related issues to tackle. Taking just three examples, mothers did not know about the importance of exclusive breast feeding, most households did not practice optimal food distribution, and families were not optimising their daily food intake.

**Exclusive breastfeeding:** Many mothers used to interrupt exclusive breastfeeding by early complementary feeding. Gradually, they learnt about the importance of exclusive breastfeeding, especially the nutritious value of breastmilk and the risks early complementary feeding exposed their infants to. Accordingly, by the time the price hike set in, most mothers were already used to exclusive breastfeeding. Therefore, their children were less vulnerable to a wide range of diseases, and in this respect less prone to the increased risk of malnutrition. In addition, the practice of exclusive breastfeeding allowed mothers to save their money by not spending it on expensive complementary foods.

**Optimal food distribution:** Tdh Foundation has been tackling social issues (gender) and taboos for many years. This helped many families to learn about the importance of optimal food distribution among their household members. Therefore, especially pregnant and lactating mothers and children were better protected from reduced access to food due to the price hike.

**Optimising daily food intake:** In order to add value to household members' daily food intake, families gradually learnt how to assess locally available food items in terms of their affordability and nutritious value. Households were therefore able to optimize their food intake during the food price increase.

## Impact on malnutrition prevalence

Tdh Foundation's experience indicates that its comprehensive MCH/N programmes and the integrated community based work, in particular, have had a positive impact on the prevalence of malnutrition in the face of rising food prices in the communities. This conclusion is partly based on an assessment comparing the prevalence of wasting for two different groups of under-5 year old children. The first group is from a target area (one Union) where Tdh Foundation has been providing community based preventive services since 2004. The second group is from a neighbouring target area (one Union) where Tdh Foundation launched its operations only recently (2008). The data analysed for both groups were collected from 5% of households in all villages in the Unions at the end of 2008 (see Table 2). Wasting prevalence was 6.5% (5.8% moderate + 0.7% severe) (WHO Growth Standards) in the target area where Tdh Foundation has been working since 2004, whereas the figures for the new target area are 23.4% (17.2% + 6.2%). Although the comparison is not statistically valid, i.e. they are not based on cluster surveys and there are no confidence intervals, the marked difference between the two areas does suggest a positive impact of the Tdh Foundation programme on child nutritional status. The populations in the two neighboring target areas have been exposed to very similar social, economic and environmental conditions. Hence, the Tdh Foundation's community based preventive work may have contributed to a reduced risk for children becoming malnourished (odds ratio) by a factor of 3 (CI 95%: 2.2-4.0).

Another indication of Tdh Foundation's programme impact is provided through monthly monitoring of severe malnutrition in its target areas. In three target areas, 362 children under two years of age were monitored on a monthly basis over a period of six months when food prices were increasing sharply, i.e. between December 2007 and June 2008. Data on their nutritional status (weight/age) were collected and analyzed according to WHO growth standards. The findings indicate that in spite of the considerable price hike, the nutritional status of the under two population improved. In fact, prevalence of severe malnutrition decreased from 9.7% to 6.9% during the corresponding period. This may be due to improved health and nutrition related knowledge and behaviour change due to Tdh Foundation programming, as well as to seasonal factors.

## Conclusion

At a time when the international community is preoccupied with the crisis in financial markets, the world's poor are still trying to tackle the effects of the food crisis. In Bangladesh, for example, there is a strong indication that malnutrition increased due to the sharp price hike the country experienced between 2007 and 2008. Impact on severe malnutrition is particularly striking. Tdh Foundation's experience indicates that its community based programmes may have had a positive impact on the prevalence of malnutrition in the face of rising food prices and corresponding lack of food in the communities.

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Community health education in a programme 'target area'

Tdh Foundation, Bangladesh, 2008



# Putting IFE guidance into practice: operational challenges in Myanmar

Father of a baby who lost his mother in the cyclone when he was 3 months old. Save the Children breastfeeding counsellors support a combination of wet-nursing by an aunt and safer artificial feeding

By Victoria Sibson



Victoria Sibson has been the emergency nutrition adviser for Save the Children UK since April 2007, with a focus on treatment of acute malnutrition and infant and young child feeding in emergencies. Victoria led Save the Children's nutrition response to cyclone Nargis in June and July 2008.

The tireless efforts and innovation of the programme manager, Khin Sett Linn, and her team were essential in realising the response reviewed in this article. The work of Bienfait M'mbakwa, SCUK emergency response nutritionist, in evaluating the response and the insight of infant feeding consultant, Nina Berry, is gratefully acknowledged.

*This article outlines the challenges in implementing a response on infant and young child feeding at scale in Myanmar in 2008. It draws upon a review by Save the Children UK on the Save the Children Alliance 'IFE response' to cyclone Nargis.*

Cyclone Nargis was the worst natural disaster in the history of Myanmar. It struck on 2nd and 3rd May 2008, causing devastation across the vast and remote Ayeyarwady delta and in the city of Yangon. The scale of human loss and suffering was enormous. Nearly 140,000 people were killed or remain missing and 2.4 million people were severely affected. Save the Children had been working in Myanmar for 13 years, in a large-scale multi-sectoral programme. Immediately after the cyclone, Save the Children started relief operations, redeploying about half the 500 national staff in efforts to deliver an emergency response. A seven-sector cyclone response was implemented, involving shelter, food, livelihoods support, nutrition, health, child protection and education, focused on 12 of the 15 worst-affected townships.

The emergency nutrition response focused on treatment of acute malnutrition as part of a primary health care response in two townships, and protection and support of safe and appropriate infant and young child feeding in the emergency (IFE) in 10 townships. The IFE response was guided by the provisions of Operational Guidance on Infant and Young Child Feeding in Emergencies (Ops Guidance on IFE)<sup>1</sup> that addresses policy, coordination, assessment and monitoring, basic interventions and technical interventions. This article focuses on the IFE elements of the Save the Children response and the challenges of putting guidance into practice in this context.

## Needs assessment

An IFE response was prioritised for three main reasons:

- Secondary data suggested that pre-cyclone infant and young child feeding practices were poor nationally, with low rates of exclusive breastfeeding (0-3 months only 16%, MICS 2000), early or late introduction of complementary foods (40-50% before 4 months, 15% at 9 months, MICS 2000) and poor dietary diversity and feeding frequency for the complementary feeding age child.
- Since the cyclone, there were cases of young children and infants less than 6 months of age separated from their mothers and being brought to Save the Children child protection staff who did not know how best to manage them.
- Save the Children's rapid assessments confirmed inappropriate, and sometimes dangerous, feeding practices for young children, e.g. commonly infants less than 6 months were being given water, milk made from powder or condensed milk, often from bottles, and mashed rice ('kazi'), at as young as 1 month of age.
- After the cyclone, there was distribution of infant formula by some humanitarian agencies and commercial companies. A Nutrition Cluster was activated and led by UNICEF, but awareness of optimal infant and young child feeding and best practice in emergency situations seemed low amongst humanitarian actors and was not being adequately addressed by any one agency.

## Nature of the response

The IFE response comprised four main components:

- Advocacy at Cluster level for an appropriate response to IFE as per the Ops Guidance on IFE and in accordance with the International Code of Marketing of Breast Milk Substitutes and subsequent relevant World Health Assembly Resolutions (the Code).
- Sensitisation of Save the Children staff on safe and appropriate IFE.
- Inclusion of IFE in assessments.
- Integration of IFE into child protection programming in 10 townships where the child protection response was in place. This included a breast-

feeding support programme and a programme to minimise the risks of artificial feeding.

## Advocacy

Save the Children led a working group on IFE and focused its efforts on working through a list of activities drawn directly from the recommendations of the Ops Guidance on IFE. Advocacy was focused on the clusters, principally the Nutrition Cluster members, but also across sectors and with the Ministry of Health (MoH). It also involved direct lobbying of three infant formula distributing companies undertaking inappropriate distribution, resulting in cessation. Another key activity was promotion of key messages, such as the value of wet-nursing orphaned babies, through communication with the media. Tailored materials were developed for advocacy across health, nutrition and water, sanitation and hygiene programmes (WASH). A 'Joint Statement on IFE', based on the model statement produced at the regional IFE workshop in Bali<sup>2</sup> and on the provisions of the Ops Guidance on IFE, were translated and disseminated. This helped to limit inappropriate distribution of breast milk substitutes (BMS).

## Staff sensitisation

Since child protection and logistics staff were at the frontline seeing 'problem' cases or inappropriate distribution of BMS, awareness of IFE issues was strengthened amongst this group through targeted internal sensitisation activities. In addition, Save the Children health and nutrition staff were targeted for orientation on IFE. Sensitisation of the Logistics Cluster resulted in a clear statement to logistics cluster members about breast milk substitute control.

## IFE Assessment

There were no inter-sectoral rapid assessments from which to draw data but early qualitative assessments provided sufficient information to broadly determine need and the type of response required. The assessments identified the need for urgent support for non-breastfed infants and for displaced breastfeeding mothers. However, they could not provide adequate information on the scale of the problem or numbers of children in need. A 'consolidated assessment' was undertaken in early July 2008, summarising available assessment data and findings on the pre-cyclone and post-cyclone situation and the response so far. The assessment identified gaps in the wider response, documented lessons learned for future responses and provided recommendations for ongoing Save the Children programming.

## Integrated programming on IFE

The direct programme of support on infant and young child feeding capitalised on a large-scale child protection response, and was the first of its kind to be implemented by Save the Children. The child protection team's initiation of 'child friendly spaces' across multiple townships suggested that infant and young child feeding support could be a natural complement to their child protection activities. Programmes of support (see Box 1) and follow-up for both breastfed and non-breastfed infants were established.

Follow up was managed through home visits. These were generally undertaken weekly for infants being artificially fed, and less frequently for breastfed infants. Mothers were paired with a local volunteer who was trained 'on the job' by the counsellor as a lay advisor, to provide daily support to the breastfeeding or artificially feeding mother or carer. By the end of August 2008, 3 months after the cyclone struck, 110 volunteers were identified, to be paired with mothers receiving skilled support.

<sup>1</sup> Operational Guidance on IFE for emergency relief staff and programme managers. Available at [www.enonline.net](http://www.enonline.net) in 11 languages.

<sup>2</sup> Link to Joint Statement



Some referrals of malnourished infants were made to MoH hospitals but this was limited by the fact that the referral facilities did not have the expertise to care for these infants.

It was intended to link lactating mothers with relevant food distributions and screen and refer malnourished women for supplementary feeding, but due to limited implementation of targeted feeding programmes this did not occur.

### Programme coverage

The aim of this programmatic response was to cover the catchment area of the child friendly spaces in 10 townships. The result was estimated to be higher, with township coverage at an average of 18% of all villages by August 2008 (n=447 out of 2456 villages), and 40% of all villages with a Save the Children presence in at least one other sector (n=447 out of 1095 villages). In the assessed villages, 1.3% of infants under 6 months were separated from their mothers or orphaned (n=27).

A total of 67% (n=8,055 out of 12,065) of mothers with children under 2 years of age had attended one education session by the end of

August 2008 (a total of 365 education sessions held). Counsellors undertook 568 Simple Rapid Assessments and 378 Full Assessments<sup>3</sup>. Of these, 53 caregiver/infant pairs were receiving skilled support to artificially feed or to relactate. A total of 192 mothers were recorded as receiving 'basic aid' to breastfeeding. An unknown number received alternative skilled assistance from breastfeeding counsellors. Overall, 2.1% of mothers of children under 2 in all assessed villages were registered for 'continuing supportive care'.

### Response challenges

Operationalisation of these interventions has highlighted important challenges to successful implementation of the Ops Guidance on IFE related to the context (vast geographic area and widely dispersed population), the breadth, scale and focuses of the wider emergency response, 'internal' agency issues and the lack of programme models and tools for mounting an IFE response at scale.

### Coordination

A key gap was the lack of a designated agency with clear responsibility on IFE from the outset of

the emergency. Advocacy work progressed with Save the Children's involvement but was very slow, due to the informal nature of Save the Children's IFE leadership role (no terms of reference), lack of time, lack of clarity about how best to engage the MoH, and lack of IFE emergency preparedness (both within Save the Children Alliance and externally).

Specific weaknesses related to the lack of designated coordinating agency included that the military were not sensitised and distributed infant formula; there was no mechanism to control BMS donations that did arrive; and there was poor initial sensitisation of the other Clusters on IFE (logistics, food aid, health, child protection). Also, within Save the Children there was a different management grouping for nutrition (with health) and food security and livelihoods/food aid (with education and protection), which hindered creation of programming links.

### Poor agency awareness

Sensitisation of Save the Children staff proved a key challenge for nutrition staff. Mixed awareness and understanding of IFE among all other Save the Children staff was complicated by no prior sensitization on the issues, vast numbers of mobile staff and rapidly expanding staffing structures as well as high staff turnover. Lack of 'internal' awareness also meant that integrated programming 'on paper' was not so easily reflected operationally – in this instance, the IFE programme overlapped with the operational areas of the child protection teams but was not so simple to integrate 'on the ground'. On the positive side, whilst a multi-sectoral response requires negotiation between sectors within an agency (each sector effectively 'competing' for their share of the proposed funding), the coordinators of the Save the Children response did facilitate inclusion of IFE into proposals at the request of the technical adviser.

### Donor driven programming

Assessing and defining need was also a key challenge. A limited timeframe to submit proposals meant there was great pressure to estimate target populations and numbers to 'treat', with no time for detailed assessment to provide this information. The multi-sectoral initial rapid assessment (IRA) tool developed by the Nutrition Cluster, that includes infant and young child feeding indicators, was not used in Myanmar. A sector specific rapid assessment was not possible given limited available time and staff and assessment sensitivities peculiar to Myanmar, where the Government does not generally approve or facilitate assessments. An externally led wide assessment (the 'Village Tract Assessment') included questions on infant and young child feeding but insufficient data on the demography of the included households and other contextual information severely limited the utility of the findings (e.g. it was found that 2% of households used infant formula prior to the cyclone, and 1% after, but additional information to understand this finding was lacking). Overall, the data available were not sufficient to determine scale of need or areas for geographic focus.

### Possible low coverage of those most at risk

Although programme coverage, when estimated 3 months post cyclone, was higher than aimed for, it was slow to achieve due to the ongoing process of community assessments leading to individual

## Box 1: Programmes of support for breastfed and non-breastfed infants

### Support to breastfeeding women

A 'trainer of trainers (ToT)' was hired in the first weeks to provide a rapid 1 day training for 22 nurses and midwives to become breastfeeding counsellors. This was followed up after a couple of months with an additional training, focusing on counselling skills when it became clear that this would be beneficial.

Participants undertook all aspects of basic aid and skilled support as outlined in the IFE Modules 1 and 2<sup>3</sup> and the WHO 40 hour breastfeeding counselling training course<sup>4</sup>. Tailored materials were developed by the ToT to support this abbreviated training. Posters with six key infant and young child feeding messages were developed within 2 weeks and flip charts for counselling developed within 1 month (both were adequate for first phase IEC (Information, Education and Communication)).

The breastfeeding counsellors were deployed to all ten child protection townships. Their main tasks were to:

- Undertake community assessments in the catchment areas of 'child friendly spaces'.
- Identify carers/infants who required additional assessment and potential support.
- Provide basic aid and if necessary, further skilled support to these carers and infants.

The counsellors assessed communities spreading outwards from the new offices (counting children <2 years, infants <1 year, numbers of infants artificially fed or requiring assistance, numbers of pregnant women and also identifying wet nurses). On the same day as a community assessment, counsellors called mothers with children under 2 years of age for an education session and asked who in the group was having breastfeeding problems. Those women highlighting problems and wanting help met with the counsellor individually for a brief chat about the details of the problem, modelled on a 'simple assessment'.

Where indicated, a more extensive 'one to one' session was implemented with scheduled, time to observe, talk and discuss the child's feeding and associated problems, modelled on a 'full assessment'. A plan was made for follow up as appropriate.

Simple Rapid Assessments and Full Assessments of infant feeding with individual carers and their children were based on the guidance and tools provided in IFE Modules 1 and 2. Mothers and all those attend-

ing education sessions were given High Energy Biscuits (and shop bought biscuits in their absence). Babies were weighed - it was generally reported that there was not a problem of weight loss (suggesting support choices were good and feeding adequate).

### Support to artificially fed infants

A need for small-scale support to non-breastfed infants had been identified through the cases presenting to the child protection team and the rapid assessments. An infant formula distribution system and support mechanism was set up to meet the needs of infants who were not breastfed based on defined criteria:

- Mother is unavoidably absent or dead, or mother is critically ill and incapable of breastfeeding (temporary use may be all that is needed). Mothers who are unwell should be encouraged to breastfeed frequently.
- Mother rejects infant (temporary use may be all that is needed).
- Baby artificially fed before the emergency (temporary use may be all that is needed).
- Mother is relactating, so until breastfeeding is re-established.
- Mother tests HIV positive, artificial feeding is Acceptable, Feasible, Affordable, Sustainable and Safe, mother chooses to feed her baby infant formula, and neither a (full time) wet nurse nor breast milk donor can be found.

The team developed a spreadsheet for calculating infant formula needs. Locally purchased infant formula, meeting Codex Alimentarius standards, was relabelled in Burmese (meeting the Code requirements). The distribution system was informal (small quantities of relabelled formula given to each carer by the dedicated counsellor following assessment) but seemed appropriate to need and was manageable at this scale.

Because feeding bottles are very dangerous in unsanitary conditions, a 'bottle amnesty' was offered. Beneficiary mothers/carers of the IFE programme were asked to surrender their bottles in return for cups, and supported to increase their breastmilk production so that BMS (and feeding bottles) were no longer necessary for the child. The bottle amnesty was not explicitly planned in the response but was a necessary component.



Victoria Sibson/JSUK, Myanmar, 2008

<sup>3</sup> IFE Module 1 is being updated and a new orientation package is due out in August 2009. The 2001 version, along with IFE Module 2 in English and French is available at:

<http://www.enonline.net/resources/>

<sup>4</sup> [http://www.who.int/child\\_adolent\\_health/documents/who\\_cdr\\_93\\_3/en/index.html](http://www.who.int/child_adolent_health/documents/who_cdr_93_3/en/index.html)

<sup>5</sup> Individual level assessments included in IFE Module 2.



assessments and provision of care rather than rapid initial assessment covering the whole target area. Community assessments ceased in September 2008 for practical reasons and recognising that the period of highest risk for cyclone affected infants had passed. In addition, at 18% of total township populations by the end August, coverage was still low. There is a high probability that the response missed high-risk infants who may have died in the early post cyclone weeks/months, due to slow roll out over the large affected area and poor quantification and targeting of the most vulnerable.

#### **Technical programming challenges**

In devising programmes to meet the needs of breastfed and non-breastfed infants, there were many practical challenges, including:

- The programme was understaffed for the vast geographic area, the difficulties in staff movements and the intensity of their required daily activities. Outreach workers and peer educators weren't hired as planned (due to prioritisation by programme staff of community and individual assessments and provision of care), adequate staff supervision was a challenge and community mobilisation was not sufficiently prioritised in the programme design. Also, the training of the midwives and nurses in breastfeeding counselling did not adequately cover counselling skills at first.
- IEC materials were not used across sectors (health, nutrition, child protection and education) as envisaged, due to limited cross-sectoral briefing and training on IFE.
- The group process of identifying those requiring simple assessments may have missed out infants requiring support. Also the completion of full assessments on the same day as the community assessment, education session and simple assessments may have been over ambitious and so risked compromising their quality.
- Wet nursing was promoted and a wet nurse was sought as a first option for all identified infants separated from their mothers. However, full time wet nursing was not practical in any single case encountered, due to social and economic/time constraints.
- The criteria for artificial feeding support were not always adhered to, due largely to inability to provide daily support to establish breast feeding, in the absence of recruitment of volunteer peer educators. This has resulted in more babies being artificially fed than strictly indicated (53 instead of 43).
- Due to limited staffing and a large operational area, education sessions were not often repeated. Instead, efforts focused on sensitisation and identification of infants in need and their follow up. In effect, community messaging and sensitisation was compromised by the need for limited staff to provide skilled life saving support to those few requiring it.
- There were no inpatient facilities for appropriate care for malnourished infants <6 months.

#### **Failure to meet basic food needs**

Linking women to the general food distribution (GFD) proved impossible – criteria were not flexible and the GFD had low coverage, was irregular and of poor quality, thereby also not meeting the needs of the complementary fed child. A concept note was submitted to UNICEF for the provision of vouchers for complementary foods but was not well received, as it was considered inappropriate for the initial phase response. Save the Children's supplementary feeding programme (SFP) did not admit malnourished pregnant or lactating women in the early months and SFPs were not present in other operational areas. In

devising the IFE response, it was not judged necessary to give food to mothers with adequate nutritional status. However, in practice, this fell short of carers expectations and, coupled with lack of both supplementary feeding for malnourished mothers and general ration targeting for mothers with young children, there was a shortfall in food availability.

#### **Speed of response**

Some of the response was fast once technical support was available in country, e.g. initiation of advocacy, translation of a Joint Statement on the response to infant and young child feeding, agreement on key advice and messages and development of IEC material. However, because there was no emergency preparedness for IFE and no pre-designed programming models or tools available, implementation of some activities such as staff sensitisation, procurement and targeted BMS distribution were relatively slow or were not effectively carried out. Whilst initiation of the direct programme was as fast as it could be in the programming context, the roll out was slow relative to the acute needs requiring response. Again, this was due to the large areas and dispersed population being targeted, the relatively few staff hired and the lack of programming tools.

#### **Strategic challenges to IFE response**

##### ***Convincing decision makers of need for direct support***

In developing countries in a non-emergency situation, a non-breastfed infant under 6 months of age is 14 times more likely to die than an exclusively breastfed child. Save the Children's experiences in the Myanmar context reinforces the need for programmes of direct active support for breastfeeding and to minimise the risks of artificial feeding in this context.

##### ***Determining the programmatic model for provision of direct infant and young child feeding support: inpatient vs. community level care***

Typically, mothers with breastfeeding problems or malnourished infants under six months are referred to inpatient facilities. However, these are not sufficiently accessible to the wider populations (only those close to the hospital choose to attend). Furthermore, inpatient facilities may not have the capacity or expertise to deal with the cases that do present.

Although necessitated by the identification of infants with acute needs by the child protection programme staff, the provision of community level support in Myanmar highlights major challenges. In this instance, cost was a real challenge given the staff to beneficiary ratio needed to deliver a skilled and intensive programme at such large scale amongst a widely dispersed population.

##### ***Balance of activities between advocacy, 'basic' interventions and 'technical' interventions providing direct support***

Broadly speaking, there are three categories of IFE activity reflected in the Operational Guidance on IFE: advocacy/orientation, basic interventions (e.g. newborn registration, shelter, security, general food ration access, complementary food provision) and technical interventions (e.g. skilled support to breastfed and non-breastfed infants and children). In Myanmar, advocacy and a technical intervention were prioritised by Save the Children, with less attention paid to ensuring effective basic interventions. Whilst it is likely that the restrictive environment for imports was a major advantage in preventing any massive influx of BMS in to Myanmar, there are many countries in the region where this would not be the case. With hindsight, greater attention

to basic interventions that potentially impact a greater number of infants and their carers – including plans for handling donations of BMS and to address shortfalls in food aid to pregnant and lactating women and complementary feeding – should feature earlier and higher on the agenda.

#### **Next steps**

Fundamental to meeting the provisions of the Ops Guidance on IFE is a coordinated effort that was lacking in this emergency response. As an agency concerned with IFE, Save the Children have identified the following areas of action needed:

- Early identification of a lead agency for IFE, ideally UNICEF, as stipulated in the Ops Guidance on IFE and for whom protection, promotion and support of optimal infant and young child feeding is a core commitment in emergencies (Core Commitments for Children in Emergencies, UNICEF 2005).
- Practical guidance on when and how to prioritise different types of IFE activity, particularly how to manage an appropriate balance between basic and technical interventions and advocacy/sensitisation.
- Emergency preparedness work involving country level assessments of infant feeding risks and the modelling of appropriate responses given different emergency scenarios.
- Development of emergency plans and procedures to support feeding of separated/orphaned infants.
- Development of tools to help project case-loads for direct programmes of support for breast feeding and artificial feeding.
- Urgent development of programming models for supporting breastfeeding and artificial feeding in generic emergency health, nutrition and child protection programmes. Along with the development of associated tools (e.g. for M&E) and ready to use programme specific training materials, programmatic recommendations would aid the implementation of the guidance provided in the Ops Guidance on IFE and IFE Modules 1 and 2.
- Work on defining most appropriate indicators and output/impact targets for IFE responses.

To address these areas of development and to aid IFE responses in future emergencies, Save the Children is keen to collaborate with the IFE Core Group<sup>6</sup>, interested operational agencies and notably UNICEF.

#### **Conclusions**

Save the Children's IFE response in Myanmar contributed to protecting, promoting and supporting breastfeeding and minimising the risks of artificial feeding among vulnerable cyclone affected babies and young children. However, Save the Children's efforts on IFE to take on external advocacy, internal sensitisation, consider basic interventions, and set up a technical response highlighted several important lessons. Most importantly, there were key gaps in the wider cyclone Nargis response in respecting key provisions of, and co-ordinating efforts to implement, current operational guidance. Secondly, the response also highlights the importance of emergency preparedness for an IFE response and lastly, the urgent need for the development of programming models and tools if actors are to effectively fulfil the provisions of the Ops Guidance on IFE.

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<sup>6</sup> Following on from the Myanmar experiences, Save the Children UK and Save the Children US have both become full members of the IFE Core Group.



# Coordination in cyclone Nargis response

By UNICEF Myanmar

As reflected in the field article by Save the Children, there were many elements to coordinating a response on infant and young child feeding (IFE) during cyclone Nargis. These involved collaboration with the government and Ministry of Health (MOH), the assistance of other clusters, and the support of NGOs with technical expertise. Here we share our perspective of the IFE response.

## Coordination

The Nutrition Cluster response was established on 7th May 2009. UNICEF, as the cluster lead agency, initiated, supported, assisted, coordinated and implemented all emergency nutrition activities, including IFE, in the cyclone Nargis response. The Nutrition Cluster had three working groups: Therapeutic and Supplementary Feeding WG, IFE WG and Surveillance WG. UNICEF was identified as lead for the Therapeutic and Supplementary Feeding WG. Save the Children as lead organisation for the IFE WG with support from UNICEF, as per agreement of the Myanmar Nutrition Cluster members.

After cyclone Nargis, the Nutrition Cluster, led by UNICEF, responded promptly and effectively to IFE and issues around BMS use, as reflected in the activities we undertook in collaboration with many partners:

- UNICEF developed a breastfeeding leaflet during the first week of cyclone Nargis, distributed to cluster members on 7th May 2008.
- UNICEF, with cluster members, translated, produced and widely disseminated IEC materials, along with a number of relevant statements and documents on optimal infant feeding practices. The documents included a Joint Statement on IFE (English and Myanmar versions), Infant and Young Child Feeding in Emergency Operational Guidance for emergency relief staff and programme managers (Myanmar version), and 'Protecting Infants in Emergencies: information for the Media'<sup>1</sup>. UNICEF advocated and circulated these documents to the MOH, including basic health staff, to nutrition cluster members, other relevant agencies and NGOs, in conjunction with a press release.
- The Joint Statement on IFE was endorsed by UNICEF, WHO, Save the Children,

ACF, Merlin, ICRC and IFRC and circulated to the Food Cluster on the 9th June, Protection Cluster on the 11th June and Health Cluster during June 2008. It was widely shared, especially during breastfeeding week, and dissemination included an orientation workshop for local media accompanied by advisory notes.

- The Nutrition Cluster officially requested the Logistics Cluster not to accept any milk powder or infant formula or any BMS. As a result, the Logistics Cluster ceased the importation of BMS from the Bangkok hub into Myanmar. UNICEF field staff continued to monitor the situation, along with basic health staff. Since the Post Nargis Joint Assessment (PONJA) was conducted, there were few donations of milk powder or feeding bottles witnessed.

These efforts had been regularly reported by the IFE WG, chaired by Save the Children.

## Rapid Assessment and Survey

There was a variety of rapid assessment tools used immediately after the cyclone. One of the tools was the 'multi-sectoral initial rapid assessment (IRA) tool' developed by the Global Nutrition Cluster that includes infant and young child feeding indicators. It was used for data collection for the PONJA and Save the Children participated in and helped finalise the questionnaires.

## Linkage between Community and Facility Based Management of Acute Malnutrition

The Nutrition Cluster initiated and implemented community-based management of acute malnutrition (CMAM) in 12 highly affected townships. For severely acutely malnourished children with complications, UNICEF, in collaboration with the Department of Health, strengthened and established 12 hospital nutrition units in the cyclone Nargis areas within a few weeks of the cyclone.

## Collaboration between the Nutrition Cluster and other clusters

UNICEF recognised the acute needs of children under five years and pregnant and lactating women during this emergency. Food vouchers and complementary food baskets were the domain of WFP and Food Cluster. On 6th June 2008, the Nutrition Cluster issued guidance on 'Blanket Feeding with BP5 for all 6-59 months children, preg-

nant and lactating women (PLW) and other vulnerable groups'. On 10 June 2008, the cluster issued 'Recommendations for Supplementary Feeding'. It included adding energy to the food basket/ration for children and mothers and provision of targeted supplementary feeding in areas where this was feasible.

The Food Cluster agreed to provide a one month blanket supplementary feeding with BP5 for all under five children and PLW in July/August 2008 in four highly affected townships. The Nutrition Cluster, via the Therapeutic and Supplementary Feeding WG, discussed supplementary feeding with partners and WFP. This led to WFP provision of fortified blended food to all PLW (together with children) in seven townships, starting from October 2008 and following the one month blanket feeding. (This is still continuing in two townships at present).

## Emergency preparedness and early response

The Nutrition Cluster was one of the clusters in Myanmar that had developed a Contingency Plan before the cyclone hit. Immediate responses to cyclone Nargis were based on the draft plan laid down in April 2008, which included "support of infant and young child feeding" in operational objectives, "supporting breastfeeding, food assistance for pregnant and lactating women, working with breastmilk substitutes (BMS)", and "support for breastfeeding and relaxation" as one of the immediate responses.

Preparedness activities facilitated a rapid response on IFE. In the first weeks of the response, an interagency joint statement on IFE, standard media messages and pamphlets to advocate exclusive breastfeeding were distributed widely, while a media roundtable discussion was convened by UNICEF. Awareness within the Ministry, clusters, and amongst basic health staff, non-governmental organisations (NGOs) and the community was increased by the actions of UNICEF and its partners.

Cluster meetings minutes are available in <http://myanmar.humanitarianinfo.org/nutrition/default.aspx>

<sup>1</sup> Available in Resource Library at [www.enonline.net](http://www.enonline.net)





## Invite to submit material to Field Exchange

Many people underestimate the value of their individual field experiences and how sharing them can benefit others working in the field. At ENN, we are keen to broaden the scope of individuals and agencies that contribute material for publication and to continue to reflect current field activities and experiences in emergency nutrition.

Many of the articles you see in Field Exchange begin as a few lines in an email or an idea shared with us. Sometimes they exist as an internal report that hasn't been shared outside an agency. The editorial team at Field Exchange can support you in write-up and help shape your article for publication.

To get started, just drop us a line. Ideally, send us (in less than 500 words) your ideas for an article for Field Exchange, and any supporting material, e.g. an agency report. Tell us why you think your field article would be of particular interest to Field Exchange readers. If you know of others who you think should contribute, pass this on – especially to government staff and local NGOs who are underrepresented in our coverage.

Send this and your contact details to:

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## Picture caption correction

In Field Exchange 35, the pictures accompanying a news piece on a meeting on moderate malnutrition (p23) was credited incorrectly. The examples of different formulations of ready to use therapeutic foods should be attributed to Professor Jeya Henry, Oxford Brookes University, UK, as below. The caption and credit has been corrected in the online issue.



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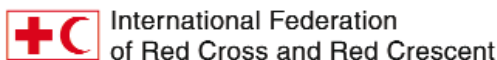
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A cattle worker at the Rual Dinka cattle camp near Rumbek. ©FAO/Jose Cendon, Sudan



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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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*The opinions reflected in Field Exchange articles are those of the authors and do not necessarily reflect those of their agency (where applicable).*



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