Ethical considerations figure prominently in this issue of Field Exchange. A field article written by Dr. Eric Grabosch tackles the problem of providing sustained resources for the treatment of severe malnutrition in countries with chronic nutritional situations. Working in local hospitals in Guinea and Malawi, Dr. Grabosch describes how previous feeding programmes by international agencies relied on expensive ‘therapeutic’ foods which could no longer be provided by the local health service once the agency had moved on. She describes how negotiations with the hospital authorities meant that feeding target being set aside to provide for cheap local foods, using innovative recipes (one involving peanut milk and the other a mixture of milk powder, corn flour and oil) to provide a therapeutic-type milk. Although not ideal in terms of treatment of severe malnutrition, they proved a beneficial nutritional compromise. Whilst not explicitly addressed, the article does raise an issue regarding the ethics of international agencies implementing a type of programme which cannot be sustained once the agency chooses to withdraw. It also highlights the dilemma of how far nutritional standards should be compromised, without truly knowing the risks we are taking on beneficiaries’ behalf until they happen.

Ethical issues are raised in a more head-on fashion by a letter and two research pieces summarised in this edition of the Lancet. The Lancet argues that very little attention has been devoted to the relationship between external human rights contexts and the ethics of human research. The authors attempt to provide guidance on how to determine human rights conditions in a given region and whether, or under what circumstances, studies in regions with few human and political rights are appropriate. The paper describes how human rights and political considerations might affect the risks and benefits of research in a number of contexts. For example, research into the health effects of rights violations may be inherently risky, as breaches of confidentiality could lead to retaliatory measures on those who provide information. Research findings could also increase risk of violations if, for example, the existence of a health condition or health practices can be used to stigmatised the population. A major recommendation in the paper is that researchers must learn about background human rights conditions as a precondition to conducting the research and assess all risks to both researchers and target groups alike.

A second summarised research paper deals with the disparities in service provision between refugees in Tanzania and the host population. Ethical issues around the evident gross inequalities are hard to ignore. The large refugee population resides next to subsistence farmers who have typically very low income and relatively high malnutrition, morbidity and mortality rates. Poor farming practices are a major constraint to food production, coupled with poor road infrastructure and inadequate marketing systems. The proximity to refugee camps has influenced decisions of the local food market and led to deteriorating security and destruction of the natural environment. While donors continue to provide support for the refugee operation, the Government of Tanzania bears the main responsibility for hosting the 500,000 refugees.

The health and nutrition situation in the refugee-affected area, unlike the refugee camps, is a significant public health problem. Malaria, pneumonia and diarrhoea are the leading causes of mortality and morbidity. Mortality and malnutrition rates amongst the host population are almost three times higher than amongst the refugees (mortality is almost ten times higher). This is, in large measure, due to the camp services provided which are not available to the host population. These include micronutrient supplementation, supplementary feeding, malaria control measures, water and sanitation programmes and parasite control for children.

We also have a letter by nutritionist, Charlotte Dufour, about the ethics of using ready-to-use therapeutic foods (RUTFs) in UN emergency feeding programmes. Charlotte is concerned about the widespread use of RUTF in Afghanistan from where she has just returned. She raises a number of ethical questions, e.g. is it ethical to distribute a product (expensive) in a crisis when alternative solutions are not yet fully tested and approved, and the efficiency of which is not proven outside the TFC? How can we deal with the commercial interests lying behind the distribution of RUTFs? She ends by posing the question of what can be done to ensure these new products are ‘properly’ used until research yields more results?

Ethical challenges often foment ideology. In the humanitarian aid world, ideology can be seductive especially when it provides clear solutions for programmatic problems whose complexity defeats most of us. Nutritionists and others working in the emergency food and nutrition sector are not immune. The dangers of ideologies are that they can lead to formulaic and unthinking behaviour which is inappropriate where programme targeting depends to a large extent on the political behaviour. It could, for example, be argued that Community Managed Targeting (CMT), which has risen swiftly up the agency agenda in recent years, is in danger of becoming an ‘ideology’. CMT has been envisaged as a simple way to empower communities during general food distributions and limit targeting responsibility of implementing agencies. This approach is currently being imported into the emergency response in Malawi on a large scale. Yet, in some countries and communities, CMT has simply not worked as ‘the community’. For a variety of reasons, do not want to exclude households from food distributions.

An example of this is described by an article in this issue of Field Exchange which, written by ACF staff, charts the implementation of CMT in Indonesia for war affected IDPs. After implementing the targeting programme over several weeks, ACF could see that the process worked fairly well on the Moslem side, whereas the results were less satisfactory on the Christian side. The focus groups (local committees responsible for targeting) identified 60% of the population as beneficiary families on the Moslem side, whereas this figure was as high as 90% in the Christians enclaves. The teams were unable to explain the disparity in compliance with targeting aims between the two communities. Nor was it possible to attribute the difference to level of food vulnerability of the two communities (as is done by a new technique called Distribution Monitoring which also attempted to establish levels of food dependency). The authors suggest that more “sociological” explanations of differences between the two communities seem appropriate. For example, “psychological” vulnerability, the different notions of solidarity / community spirit and social-economic differences due to histories of colonisation and transmigration.

This case study confirms what we should already know: CMT may work in some situations but we can’t always predict whether it will work. The complexity of factors determining human behaviour in any given situation can never be fully understood - especially by ‘outsiders’. Much as we would like clear-cut and easy answers to the enormous challenges faced during humanitarian work, the reality is probably more complex. We need to implement programmes with a considerable degree of uncertainty about what we are doing to work - especially where social factors are concerned. Ultimately, this may not be such a bad thing if it keeps us alive to the need to react to local circumstances and to remain flexible in our thinking. In short, our methodologies should never become ideologies.
Aid agencies should reorient and expand existing interventions to assist poor households capitalise on temporary improvements in environmental and security conditions in Somalia, according to a recent paper published in *Disasters*.

The paper is based on several years work experience by the authors in Somalia for both the UN and NGOs, and their participation in many meetings, discussions, workshops, missions and reports in and on Somalia. The central tenet of the paper is that a ‘livelihoods gap’ has become evident in the international community’s engagement with Somalia where interventions are short-term and do not address longer-term problems of vulnerability.

In Somalia, long-standing political, economic and social systems that sustain lives and livelihoods have been disrupted and transformed by more than a decade of conflict and recurrent episodes of drought and flooding. However, humanitarian conditions in Somalia vary considerably from year to year. For example, UN agencies estimated the immediately vulnerable and food-insecure population to be as high as 1.5 million in mid-1999. By the time of the main cereal harvest in September 2000, that number had fallen dramatically to an estimated 400,000. During such times of plenty, many poor Somalis are able to regain enough assets to survive without recourse to relief aid. The alleviation of the harshest humanitarian conditions has been facilitated by improved security conditions since the height of the civil war in the early 1990s. Yet even when such positive environmental and security conditions coincide, very few Somalis have the potential to stabilise their household economies, rebuild asset bases and invest in longer-term recovery before the next ‘shock’ occurs.

One of the long-term socio-economic effects of the war in Somalia has been to entrench unequal access to the country’s productive resource base. Current development programmes operate on the assumption that increased private sector activity, including high returns to national and international investors, will lead to poverty reduction. The authors believe that this assumption is misplaced and that opportunities for economic advancement are only available for landowners, capital holders and external investors. Until aid agencies face up to these facts and design aid programmes accordingly, little can be done to assist poor Somalis capitalise on improving environmental and security conditions in order to end the regular cycle of post-emergency recovery and relapse. One key conclusion is that ‘only by accumulating ownership of, and access to, enough assets over time will a sufficient cushion exist for Somalis to face future droughts and other natural stresses without recurrently succumbing to the need for relief assistance’.

Based on an analysis of the economic dynamics of vulnerability in Somalia the authors formulate an initial breakdown of potential reinforcing objectives to consider in programming:

- Protect household asset bases by extending access to essential social services in order to reduce household expenditures (for example, promote the presence of more aid projects for health, water, education and increase their coverage in rural areas)
- Rebuild asset bases by supporting the household economy strategies of poor groups, including strengthening the benefits received from labour migration, the informal economy, social networks and coping strategies
- Focus and time aid interventions to minimise seasonal stress (for example during the dry season and planting season) to enable households to capitalise on seasonal gains
- Stimulate household income through public works projects targeting improved market and social-service infrastructure
- Intervene in markets to ensure adequate access and terms of trade for poor households (for example, consider modalities of improving market incentives for geographical redistribution of food from surplus-producing areas, or purchasing excess livestock and grain supplies when cash earnings are required)

The authors acknowledge that such support cannot guarantee the automatic succession of any renewed or vigorous trend towards development. Rather, in the absence of further conflict, the rebuilding of household assets among poor wealth groups will allow Somalis to recover a minimum level of subsistence and undertake uncertain investment in their own future. The alternative is however all too clear – “continuous food aid, supplementary feeding, water trucking and emergency responses to epidemics as the blunt, problematic tools of last resort for the humanitarian agencies to prevent further catastrophes in Somalia.”

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Combining household livelihood security assessment and a rights-based approach to assessment in Burundi

Summary of assessment report

This article summarises the food security aspects of an innovative study by CARE, combining two livelihood assessment approaches in Burundi. Although the assessment also related to social services, health, education, water and housing, only the food security related findings are highlighted here.

Since October 1993, Burundi has experienced social and political crisis. However, an inclusive transitional government and on-going peace talks between warring parties are hopefully bringing a halt to nearly a decade of conflict. The generalised high levels of insecurity have caused a massive internal population displacement. An estimated 14% of the total population are located in displaced camps while another 350,000 Burundians live in Tanzanian refugee camps. In addition, the HIV/AIDS pandemic continues to claim more and more victims in households which are already weakened by social inequity and destitution.

A food security assessment was conducted in Giteranyi and Butihinda communes in the province of Muyinga, North-Eastern Burundi, between November 2001 and January 2002. The overall aim of the assessment was to gain a better understanding of the food security situation prevailing in the province, particularly in the two targeted communes. The study adopted two specific approaches, namely the Household Livelihood Security Assessment (HLSA) and the Rights-based Approach (RBA).

The objectives of the study were to:

- Analyse human rights and the food security situation in the province of Muyinga.
- Identify the most vulnerable and marginalised social groups in the targeted communes.
- Strengthen CARE staff and partners’ capacity by undertaking a participatory holistic evaluation, analysis and utilisation of collected information in program design and implementation, following a Rights-based Approach.
- Explore potential opportunities to remedy identified gaps.
- Generally develop usable tools for integrating HLSA and RBA founded on a true case study.

In order to achieve this, data gathering focused on a number of key areas:

- food security situation
- vulnerable and/or marginalised groups
- social services related constraints

- root causes of human rights violations
- existing opportunities within the community
- rapid institutional mapping.

Participatory Rural Appraisals (PRA) were used to ensure the participation of various social groups, including but not limited to women, the youth, Bashingante or traditional leaders, the Batwa, representatives of development committees, associations and returnees from Tanzania.

Main findings

Giteranyi and Butihinda communes are exposed to food insecurity because of the following factors:

- Social and political factors
  People in the two communes experienced considerable suffering during the crisis of 1993. These include massive destruction of socio-economic infrastructure, looting of property, internal displacement and migration to neighbouring countries. There has been an alarming reduction in the number of livestock, which further deepened the poverty of households which are no longer able to undertake breeding activities.

- Climatic factors
  The food security situation worsened due to three-years of drought-induced poor harvests.

- Demographic factors
  Land is over-exploited due to an increasing demographic pressure in both communes.

- Low support to farmers
  Given the small size of farmlands, production increase can only be realised through an intensive farming system. However, rural farmers are not trained and agricultural inputs are scarce. In addition, the low purchasing power of rural farmers does not allow them to access necessary inputs.

- Lack of rural credit
  The financial sector is not generally very developed and is not adapted to rural credit. Existing structures are not efficient and accessible to many people.

Human Rights Situation

Essentially, the poor are being exploited by the rich. It has also been observed that some groups are excluded, marginalised and are constantly subject to social injustice. Exploitation of the poor may be seen through the exaggerated and high interest charges on money they borrow to meet their immediate cash needs for medical treatment, to purchase seeds and for school fees. Administrative and judiciary authorities exercise injustice by illegal detentions and partial judgments. Among the excluded and marginalised are Batwa, abandoned and/or street children, orphans, immigrants, returnees and women-headed households. These categories have no land to cultivate and rarely access social services.

The Batwa are not represented in local administrative structures, while women are often denied the right to inherit land from their parents. The girls’ education rate is lower than boys’ and women are not represented in key administrative positions.

Some lessons learned

The integration of RBA in HLSA made it possible to make an in-depth causal analysis of the precarious living conditions in Butihinda and Giteranyi communes. The findings of the study should enable the CARE country office to identify leverage points on which advocacy work for poverty alleviation could be based.

The RBA focuses on the most vulnerable and the marginalised and any development program to be undertaken in Muyinga province must address human rights issues to advance definitely equal access to resources and basic social services.

We found that discussing issues of rights and responsibilities was not easy, especially in a large and diverse group of people. The team may have gleaned more information by investing a greater amount of time in talking to people in informal settings.

Recommendations

It is essential that vulnerable communities should be actively involved and consulted in the identification of priorities and targeting of beneficiaries to ensure equity in accessing programme benefits.

There should be no gender-based discrimination against women, and strategies must be developed to ensure that women’s rights are protected and respected when their spouses pass away.

The Batwa must be integrated into society and their rights to access land should be guaranteed like other components of the Burundian community. Their land must be delineated and registered to ensure that nobody will expropriate and expel them in the future.
Micronutrient research in progress

A n article in the last issue of Field Exchange presented a review of the approaches that agencies and others use for identifying micronutrient deficiencies. The review had been commissioned by WHO and illustrated the many gaps that persist in our knowledge of nutrition deficiencies, how to identify them and how to respond appropriately.

The Institute of Child Health (ICH) is currently completing a project with considerable relevance to the findings of the WHO review. The project, which is funded by UNHCR, Geneva, has sought to address key aspects in improving awareness, detection, and interventions for micronutrient malnutrition in refugee and emergency affected populations.

The five main activities being implemented are:

- **Building capacity for field-based detection and quantification of micronutrient deficiencies** This has involved raising awareness of micronutrient malnutrition in field staff. The experience from training workshops with survey teams in five different African countries has been used to produce a training pack which will be made available next year. This will focus on imparting basic knowledge of deficiencies and encouraging accurate recognition of clinical signs through the use of photo-cards. As indicated in the WHO review difficulties arise when clinical signs do not fall within the classic text book images. One approach to dealing with uncertain ‘cases’, or outbreaks is the use of biochemical tests. In view of the difficulties in conducting biochemical testing for deficiencies in the field, ICH have undertaken development work on nutrient analysis from dried blood spots and improving the taking of peripheral blood samples during surveys. Surprisingly, some of the standard laboratory assays also required development work. Although manuals published by WHO and others describe biochemical methods for the assessment of conditions such as pellagra, scurvy and beriberi, some of these are, in practice, difficult to set up and tend to produce results which may be open to interpretation. This became apparent when setting up a method for measuring niacin status in response to a suspected outbreak of pellagra in Tanzania in 2001. ICH have subsequently invested time investigating alternative, reliable and valid methods for laboratory analysis.

- **Micronutrient malnutrition needs assessment surveys in refugee situations** ICRRC have completed surveys in Kenya, Uganda, Ethiopia, Tanzania and Algeria. These surveys have attempted to adopt a holistic approach to the causes of deficiencies and have, for example, included measurements of the main parasitic causes of anaemia such as malaria and intestinal helminths as well as looking at dietary intake. These data provide a valuable overview of the status of micronutrient malnutrition in a range of refugee operations and may well prove useful in formulating strategies and policies to improve operations at headquarters level. They have also been used to advocate for improvements in programmes to tackle identified problems in the field, e.g. strengthening of malaria programmes and increased supply of blended food in Uganda, and improved coverage of vitamin A capsule distribution in Kenya.

- **Evaluation of the effectiveness of iron cooking pot provision as a strategy to reduce anaemia.** In collaboration with CDC, Atlanta, an intervention trial is ongoing in Burundian refugee camps in Tanzania on the effectiveness of stainless steel cooking pot distribution in reducing iron-deficiency anaemia. This project is funded mainly by WFP and is an innovative approach to improving the dietary intake of iron in refugee situations. The end point evaluation is scheduled for early in 2003.

- **Trial of multiple-micronutrient supplementation for pregnant women** A large-scale supplementation trial of multiple-micronutrient supplements for pregnant women in a refugee setting is reaching completion in the Dadaab camps in Kenya. This effectiveness trial, undertaken in close cooperation with MSF-Belgium, seeks to address the question of whether a multiple micronutrient tablet can be more effective than the established iron and folate regimen in controlling anaemia and other deficiencies during pregnancy. Issues of compliance with supplementation are receiving special attention as these are often neglected and can be major causes of programme ineffectiveness.

- **Development of nutrient calculation software** One crucial tool in combating micronutrient malnutrition is the ability to monitor the micronutrient content of food aid distributions. This, of course, requires good records of distribution and, in some cases, on-site distribution monitoring as well as knowledge of the micronutrient content of the commodities. There are a number of software applications that can be used to calculate the nutrient content of food aid. NutCalc, NutVal and Food Basket Calculator are three examples of software developed especially for this purpose. All of these have disadvantages and advantages. NutVal was originally developed by UNHCR and is a relatively simple Excel application that can run on most computers with minimal set up or technical expertise. However, it was in need of an update. A modified version of the NutVal spreadsheet application has been produced and following field-testing is being further modified before production of the final version later this year. It is hoped to publish the findings of these trials and studies as they are finalised in subsequent issues of Field Exchange.

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1. CARE International in Burundi Design, Monitoring and Evaluation Team (Mario AndrÈ Robert, Vincent Niyungeko and Rashid Rehema) led the study team involving participation of 15 CARE employees. For further details contact Vincent Niyungeko or Chris Necker at email: carebur@careburundi.org


3. HALS is an assessment methodology developed and employed by CARE.
Influence of USAID policies on food aid distribution: time for reform?

Summary of published paper

A paper has recently been published which describes the food commodities that are used in U.S emergency food aid programmes, and outlines issues in their distribution, selection and formulation that may limit their ability to meet the nutritional needs of recipients. This paper has proved timely since the U.S Congress plans to renew the authorising legislation by the end of 2002.

Current U.S international food assistance programmes began after World War II, in an environment of agricultural surpluses and a looming Cold War challenge to win over emerging nations. Two specific programmes started during that period and continue to provide much of the world’s emergency food aid. These are Title II of Public Law 480 of 1954, administered by the USAID (commonly known as the Food for Peace Programme) and Section 416(b) of the Agricultural Act of 1949, administered by the U.S department of Agriculture (USDA). Despite the declining global contribution of food aid to overall development assistance, the U.S continues to be the largest donor of both emergency and non-emergency food aid. Although the PL480 programme procures its food with an annual congressional appropriation, the quantity of emergency food aid available through the Section 416 authority is totally dependent on U.S agricultural surpluses. For instance, after a period of abundant surpluses during the1980’s, subsidies to U.S farmers dropped and Section 416 assistance fell to zero. Surpluses did not revive until price supports were introduced in 1999.

Overall, there were 16 foods provided by the U.S for foreign emergencies in fiscal 1999. These foods reflect abundant U.S cereal and soy production that have dominated food aid programmes for 50 years, including the fortified and blended foods that were introduced in 1966. The foods most frequently provided in emergency situations are unprocessed grains, although processed foods are provided for meeting micronutrient needs and helping in situations where local processing capability is absent. Processed foods distributed in substantial quantities were wheat flour, bulgur wheat, cornmeal, vegetable oil and various forms of soy-fortified cereal and cereal blends.

USDA and USAID developed blended foods (CSM and WSM) to complement the supply and acceptance of dried milk as a protein source. The nutrient profile of these blends was designed for growing children to provide a high protein diet and reflected a prevalent view of child nutritional deficiency at that time. Since the protein-fortified and blended foods were introduced, formulation and fortification of processed foods have been changed infrequently and only slightly to reflect new scientific knowledge. There has been limited incorporation of new technical knowledge concerning efficient production processes, nutrient absorbability and responses to the special requirements and diets of disaster victims. In general the formulation and variety of foods provided is more dependent on U.S agricultural food supply policy and food supplier interests.

In the 1990 PL 480 legislation, the US government mandated the current policy “to use abundant agricultural productivity to promote the foreign policy of the US by enhancing the food security of the developing world through use of agricultural commodities”. This is related to several issues influencing the selection and distribution of US emergency food aid.

Delays and gaps in shipment resulting from the need to procure foods from U.S suppliers

Delays and pipeline breaks in delivery of foods from US suppliers to distant emergency sites have been common problems faced by USAID programmes. Private voluntary organisations (PVOs) are often told to allow for a 4-5 month lead time before shipments reach the field. However, for rapid onset emergencies, diversion of foods already in the pipeline for development purposes can substantially shorten this lead time. Also, in recent years, delays have been offset by greater pre-positioning of food aid stocks at US ports. Furthermore, USAID can purchase from foreign sources and deliver small quantities of foods for a short time with cash resources provided to OFDA.

Uncertainties since the overall availability of foods depends on US agricultural surplus policies

This affects the Section 416 (b) programme (USDA) more than PL 480 (Food for Peace). The former provides for overseas donations of surpluses owned by the US government’s purchaser of farm commodities, Commodity Credit Corporation (CCC). However, surplus commodities acquired by the CCC may only be made available if these surplus commodities cannot be sold or otherwise disposed of without disruption of price-support programmes or sold at competitive world prices. Eligible commodities include dairy products, rice, feed grains and products, oilseeds and other commodities acquired by the CCC through price support operations. On the other hand, food aid under PL 480 is better orientated towards emergency demand (when unanticipated emergency demand is great, it is possible to borrow from other legislative authorities).

Vested interests

Along with NGOs, domestic food commodity interests are a formidable constituency supporting the continuation of a substantial US global food aid commitment. However, the pursuit of self interest by US producers and food processors, the ingredient industries, shippers and other interests represents a major influence on the commodities and conduct of the programme. Two legal requirements are especially illustrative of commercial interests that influence the programmes, namely the Value Added Mandate and the Cargo Preference Act.

Value Added Mandate: Under Title II non-emergency, the PL 480 law mandates that 75% of all foods shipped are to be value added, that is they must be processed, fortified or bagged. Although this mandate does not explicitly apply to emergency food aid, it has a bearing on the commodity mix in emergencies since donors and field agencies are accustomed to requesting them, know how to handle them and US suppliers are likely to have them available.

The Cargo Preference Act: Under the Merchant Marine act of 1936, 75% of all food aid must be shipped under US flag carriers, a generous subsidy to the US Merchant Marine. Regulations do provide exceptions to minimise the effect of timeliness.

Shipping costs on US carriers are 20-50% higher than foreign-flag carriers.

Conclusions

Non-nutritional priorities stemming from US food aid policies and customs have been the dominant influence on formulation, selection and distribution of food aid. Although further research is needed to establish whether the nutrition of disaster victims is systematically being compromised by these policies, inquiry could begin by sorting through the issues and options for policy change along the following lines:

1. Strengthening of mechanisms now available to shorten lead-time, such as more pre-positioning of food stocks at US or foreign ports, using a portion of the emergency food aid budget to purchase foods from local sources near emergency events or bolstering the undesignated cash budget of OFDA.

2. If reliance on the vagaries of food surpluses was reduced, could a regular humanitarian budget appropriation be generated to meet worldwide emergency food aid contingencies? Could the next round of talks on world trade be approached with a
A recently published article documents and analyses a Konzo outbreak in south west Democratic Republic of Congo (DRC) in 1996. Konzo is a distinct upper motor neurone disease that has been attributed to the combined effect of high cyanide and low sulphur intake from an exclusive consumption of insufficiently processed bitter cassava.

In August 1996, the chief medical officer reported poliomyelitis cases in the Kahemba region of Bandundu province in DRC. Following an initial investigation, the diagnosis was reviewed and changed to Konzo. With the support of MSF, Epicentre carried out an investigation in the region with the purpose of describing the epidemic and studying factors associated with the recent increase of the disease.

The investigation, carried out in November 1996, involved two field teams and was conducted in all the villages situated along the provincial roads accessible by car or motor-bike, an area covering almost 300 km. For each case identified, demographic data and history of disease were collected using standardised questionnaires. Prevalence and incidence rates were calculated using data collected by the local administration in 1995 as the denominator population. Data were also collected on food crops, dietary habits, cassava processing and knowledge and attitudes on Konzo from village group discussions.

The investigation confirmed that Konzo was endemic and highly prevalent in the region. An increased number of cases in 1996 suggested a large-scale outbreak. The disease mainly affected those living in isolated locations with no access by car, women in the reproductive age group and children over 2 years. The number of cases was higher during the dry season. There was a high proportion of women affected in the first term following infant delivery. Increased protein and vitamin A requirements during pregnancy, lactation and child growth could explain why women and children are at an increased risk of contracting Konzo. (It has been demonstrated that serum levels of vitamin A following delivery are low compared to non-pregnant women, although requirement for vitamin A seems to decrease as retinol levels in breastmilk decline progressively during breastfeeding. This could explain the high percentage of women affected at an early stage after delivery).

Although data could not be found to prove the hypothesis, there were indications of a rise in palm oil price during this period which could explain the distribution of disease among the populations who were poorest and furthest from the supply route. The authors of the study concluded that Konzo is a major public health problem in Kahemba region with dramatic social consequences. In the affected villages the women could not farm or feed their families. Many of their husbands had already left them and only a few women received any assistance from relatives.

Discussions did not help identify any changes in cassava processing or in the climate that could explain a mono-consumption of insufficiently processed cassava. However, Konzo seems to affect particularly the population in Bandundu where cassava flour is not mixed with maize as it is in the rest of the country (maize contains sulphur that is needed to detoxify ingested cyanide). The authors state that this study shows a need to conduct further research into Konzo and in particular the role of vitamin A in its development.

Analysis of the 1996 Konzo outbreak in Democratic Republic of Congo

Summary of published paper

In older people, the use of body mass index (BMI) to determine nutritional status is often unreliable. In particular, the accuracy of height measurement may be impeded by age-related spinal deformities, such as kyphosis (curvature of the spine), alterations in height and shape of the vertebral sics, and vertebral compression. A number of studies have demonstrated that other skeletal measurements might be employed as alternatives to height when assessing the older age groups. Arm-span has been shown to approximate to height at maturity in Caucasian populations and is relatively independent of ageing, suggesting that it may offer an alternative to height in calculating BMI in older populations. Also, it is an inexpensive and simple measurement to obtain in a field setting. However, there are few equations developed for determining height from arm-span in African populations and these are often based on small samples. A recent study set out to examine the differences in the relationship between height and arm-span in four ethnic groups in Ethiopia. In addition, the study determined BMI using arm-span cut-off values (BMI-as) equivalent to conventional BMI which uses height cut-off values (BMI-HT), for chronic energy deficiency.

A total of 706 Ethiopians aged 18-50 years from four different ethnic groups were measured. Anthropometric measurements (weight, height and armspan) were obtained using standard techniques. BMIs using arm-span (BMI-as) and height (BMI-HT) were calculated. T-tests were performed to compare means, and linear regression employed to investigate the relationship between BMI-HT and BMI-as.

Results

Both ethnic and sex differences in the relationships between height and arm-span and their derived variables (BMI-as and BMI-HT) were found. Arm-span measurements exceeded height measurements in all the ethnic groups and in both sexes. Arm-span and height and their corresponding BMI-as and BMI-HT were highly correlated in all ethnic groups. BMI-as cut-off equivalents to the conventional BMI-HT classification of chronic energy deficiency were similar in the Oromo, Amhara and Tigre groups, but substantially higher in the Somalis.

Conclusion

Arm-span can be used as a proxy for height to estimate BMI, however the relationship between the two measures varies considerably with ethnicity and sex. Unless sex and ethnicity specific cut-offs are applied, the use of BMI-as using conventional cut-off points will over-estimate the prevalence of underweight in these populations.

In order to estimate true height from arm-span in elderly people, it is necessary first to establish the relationship between these two measurements in a younger population of the same ethnicity. The authors propose that this study has achieved this for Ethiopia, since the four ethnic groups studied together make up more than 85% of the Ethiopian population. It is therefore possible to use the relationships identified to estimate height from arm-span in older Ethiopians in whom height cannot be measured accurately.

However, additional research is needed to determine similar anthropometric differences in other populations, in Africa and in other regions of the world.

Assessing nutritional status using arm-span measurement

Summary of published paper

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Human rights, politics and reviews of research ethics

Summary of published paper

Research into human rights violations

Research into the health effects of rights violations is inherently risky. Breaches of confidentiality could lead to retaliatory measures. Studies cannot proceed if place participants, researchers or monitors at substantial risk. Risk reduction poses challenges. Researchers must find new ways to work. For example, famine conditions in North Korea have been investigated by interviews with Koreans who have fled into China and were therefore not put at risk.

Non-political research

Non-political research, e.g. into malaria vaccines or micronutrient supplementation, is often proposed in settings with a dubious rights record. However, this can also carry risks. For example, in Rwanda census lists of orphanages and boarding schools were enumerated for research purposes. These lists included numbers of children, name, age, sex and ethnic origin. The lists were later gathered by government agents ordered to kill all children with Tutsi names or of Tutsi descent. Researchers must also learn what they can about possible retribution after they leave. Might participants be punished for associating with researchers? Might governments use the study to legitimise their activities to the outside world?

Research findings that could increase risk of violations

In some cases research findings could lead to harm, e.g. existence of a health condition or health practices may stigmatise the population.

Dangerous conditions for research staff

In countries with poor human rights, risks to local and expatriate research staff must be considered, particularly if findings may be construed as critical of government policy. Findings, for example, that show that child mortality is increasing or that malnutrition exists, might be seen by government as criticism of leadership. Local staff may be accused of bringing shame to the country. Leaders may be accused of bringing shame to their government, and expatriate research staff must be considered, particularly if findings may be construed as critical of government policy. Findings, for example, that show that child mortality is increasing or that malnutrition exists, might be seen by government as criticism of leadership. Local staff may be accused of bringing shame to the country.

Validity of research in certain human rights conditions

Research may be hampered by difficulties in obtaining valid data.

The authors also point out that informed consent is often the cornerstone of research ethics. However, assuring that consent is voluntary is also challenging. A recent article in the Lancet argues that very little attention has been devoted to the relationship between external human rights contexts and the ethics of human research. The authors attempt to provide guidance on how to determine human rights conditions in a given region and whether, or under what circumstances, studies may be considered appropriate in regions with poor human and political rights records.

The authors explain how ‘research ethics reviews’ generally focus on the procedures and study design proposed by investigators e.g. whether participants are consulted or coerced, but that routine questioning about background settings and their effect on the risk/benefit equation of research is rare. They argue that neglecting to examine the pre-existing human rights conditions of participants could result in the approval of investigations with unacceptably high levels of risk. The paper describes how human rights and political considerations might affect the risks and benefits of research in five contexts.

Risks of obtaining fuel in displaced populations

Summary of published letter

A recently published letter in the Lancet, written by the Refugee Studies Centre at the University of Oxford, raises the issue of violence against women and adolescents faced with the responsibility of obtaining fuel in internally displaced populations. Since fuel provision is usually irregular in camp settings, there are often disturbing consequences as women/girls are forced to leave camps to gather wood. A number of disturbing examples are cited. For example, IDP women and adolescent girls are frequently raped in Angola especially when military troops are stationed near their camps. In the Dadaab refugee camps of eastern Kenya, there have also been reports of many rapes by bandits. Rape and sexual abuse of displaced women and adolescents by paramilitary groups have been reported as a strategy of intimidation in Colombia. In Burma (Myanmar), many internally displaced women and children are raped especially when working in the fields outside the camps.

The authors suggest that cooking fuel should be classed as essential for food preparation, warmth and light. They argue that provision of fuel would lower the incidence of such attacks by decreasing the number of necessary unprotected excursions. They also recommend that guidelines should state that irrespective of the circumstances and without discrimination, competent authorities should provide internally displaced females with a minimum of safe access to appropriate fuel.

1 La Mont-Gregory E and Matenge M (2002): The Lancet, vol 359, May 18, pp 1782-1783
Against a backdrop of oppressive limits on individual freedom, citizens may fear reprisal if they do not participate in research, while government authorities may preclude any possibility of voluntary participation.

Ideally, the problems of the most disadvantaged groups should be addressed in research, and if a community is to bear the risk of research, it must also reap future benefits. However, under an oppressive government the most disadvantaged may be least likely to benefit from research findings. Institutional review boards should therefore ask investigators about the implementation plan for their research and steps to ensure that research findings are applied to the most at risk populations.

Recommendations

Considering these contexts, the authors make the recommendations that follow.

Researchers must learn about background human rights conditions as a pre-condition to conducting the research. There are several sources of information, e.g. human rights organisations, local NGOs, international media, under-ground movements, etc. These sources may be able to provide information on human rights organisations whose experiences may help assess the likelihood of successful future interventions in response to research findings. Indeed before initiating a study, investigators might need to consider whether there are barriers to implementation of study findings, such as might have occurred regarding women living under Taliban rule, and to investigate indirect methods of provision of study benefits.

If after completion of the above steps, it seems risks can be managed, adequate consent procedures can be designed and findings applied to the community, then official approval must be considered. Generally, studies have to be reviewed by the ethics committee board in the host country. Also, the Ministry of Health is normally informed of the study and asked for permission. If such approval is problematic, studies may need to be done clandestinely. An alternative might be to establish an outside international review board, comprised of representatives of a human rights organisation or NGOs to provide independent review. Such a review would be in keeping with the spirit of international regulations, in that a body more familiar with local conditions and most likely to have local citizens’ interest at heart should provide permission.

The authors conclude that ultimately, if research does not relate directly to rights violations, researchers must justify why a study ought to be done clandestinely. An alternative could be to establish an outside international review board, comprised of representatives of a human rights organisation or NGOs to provide independent review. Such a review would be in keeping with the spirit of international regulations, in that a body more familiar with local conditions and most likely to have local citizens’ interest at heart should provide permission.

The authors argue that the existence of such contradictions is one way of recognising urgent research needs. They provide examples of issues and questions where insufficient knowledge leads to conflicting views and where research is needed.

i) What is the best way to reduce food aid resources in recovery, while ensuring the most food insecure receive adequate food aid? Some believe in limiting food aid to only the poorest households while others advocate reducing the general ration to everyone, feeling that sales signaled other problems. They felt that refugees were not familiar with the whole grain maize, that food aid commodities took a long time to cook requiring a lot of scarce fuel, and that refugees needed money to buy other foods to balance their meals and to purchase essential non-food items. In the event, subsequent research showed that both interpretations were correct. A small proportion of the refugees did not need all the food aid and so sold the excess. However, a much larger part of the population sold food aid, although they sorely needed it, to satisfy their daily energy requirements.

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The authors argue that the existence of such contradictions is one way of recognising urgent research needs. They provide examples of issues and questions where insufficient knowledge leads to conflicting views and where research is needed.

ii) Some believe that long-term recipients choose to depend on food aid rather than work while others argue that emergency affected persons immediately initiate coping strategies to obtain other food.

iii) Is under-five wasting the best indicator of population nutritional status when there is evidence, in some situations, of normal levels of wasting in under fives but malnutrition amongst older children and adults?

iv) In resource scarce situations, admission criteria for therapeutic feeding centres may be lowered to less than 60% weight-for-height. Would more lives be saved if those between 60-70% weight-for-height were admitted?

v) In Africa, UNHCR spends about 11 cents per day per refugee. In the Balkans, the figure is 1.23 dollars. What are the nutritional implications of such disparities in spending? Is the international community violating African refugees’ basic human right to food? What institutional changes are needed to ensure equitable nutritional assistance to all emergency-affected populations?

The authors suggest that when pressed by the urgency of emergency circumstances to decide, decisions end up being based on anecdotal evidence, common wisdom, logical assumption or simply the hope of doing good. Such decisions create precedents that become institutionalised without adequate verification.

Propositions and conclusions

It is proposed that new techniques and institutional changes are needed to promote research to define and validate emergency programmes. Traditional research approaches need modification since the approaches, tools and methodologies developed for non-emergency settings often do not suit emergency settings. For example, controlled experiments may be unethical as well as impossible to implement. Large surveys are often impractical. Participatory approaches may be difficult where communities have been torn apart and the vulnerable are not represented by the leadership. Emergency affected populations may exaggerate severity of circumstances to gain additional help and qualitative data collection must consequently incorporate numerous cross-checks to ensure validity.

Comparing the case then made that existing structures of international assistance are not geared to promote research or accommodate learning from experience. Relief agencies fear that they will be blamed for shortfalls revealed by evaluations. Currently, few organisations maintain professional emergency nutritionists on staff so that there is limited institutional learning.

The paper concludes that there is a need for qualified observers in the field to capture more information. This would be invaluable in ensuring that programmes remain effective as conditions change. Data collected could also be used for research purposes. However this will require the development and mobilisation of specially trained professional emergency researchers, who can monitor and record information to support research during emergencies and also continue analyses between emergencies. There must also be a means of rapidly mobilising resources for research for these professionals.

Finally, to ensure the quality of emergency nutrition research and its application, a system of peer review is needed.


Research

The need for nutrition research in humanitarian emergencies

Summary of published paper

While the exception of the management of severe malnutrition, there has been little research specifically conducted to support emergency food and nutrition programmes, according to a recently published article. This has contributed to a lack of empirically based guidance regarding how to accurately identify problems and select the most effective means to achieve desired objectives. As a result programming decisions have often been based on extrapolations, anecdotal evidence and intuition as a result. Consequently, donors, implementers and affected governments (who frequently hold contradictory opinions) expend time and resources on controversies about when and how to act. These controversies reveal inadequate knowledge for which research is urgently needed.

The authors provide examples of past controversies where research was urgently needed, such as the sale of food aid by refugees in Uvira, Zaire in 1996. Here there were radically different views regarding what motivated these sales, which had drastically different implications regarding how interventions should change. Food aid donors and the WFP assumed that the massive sales were a sign that the refugees had adapted to their new environment, were acquiring food on their own and thus needed less food aid. UNHCR and NGOs, on the other hand, felt certain that sales signaled other problems. They felt that refugees were not familiar with the whole grain maize, that food aid commodities took a long time to cook requiring a lot of scarce fuel, and that refugees needed money to buy other foods to balance their meals and to purchase essential non-food items.

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Summary of published paper

The subject of school feeding in conflict and crisis was addressed by Soha Mousa in the Dr Abraham Horwitz Memorial Lecture at the Berlin symposium on Nutrition in the Context of Conflict and Crisis (29th SCN session).

The paper set out a number of benefits of keeping schools open and offering meals during times of crisis. Such benefits might include improved attendance and attentiveness and keeping children out of the workforce. Crises, especially those involving conflict, tend to pull children into the workforce as formal labour or as child soldiers. An objective of keeping children out of the workforce may be achieved if the meal is sufficiently large in terms of income transfer. Another benefit is to provide children with a sense of normality, unbroken routine and a friendly and structured environment at a time of turmoil.

Keeping schools open in such circumstances can be difficult, but not impossible. UNICEF can make educational inputs available and provide access to water, sanitation and health services. WFP can identify and supply food needs. Community members can participate in any necessary re-construction and food delivery. This type of joint arrangement worked very well in Daru in Sierra Leone. The town was a safe-haven in an area surrounded by conflict. The Norwegian Refugee Council with support from UNICEF, WFP, UNHCR and local NGOs, expanded their rapid educational programme to the region. The programme was designed for children between 7-12 years (mainly refugees, returnees and displaced persons). Within one academic year (2000-1) enrolment had increased from 1000 to over 6,500 children.

The paper identifies the main challenges to such programmes in situations of conflict and crisis as security; the political nature of the crisis and related vulnerability; nutritional issues like targeting and programme design; availability of teachers and school infrastructure; availability of complementary health activities and gender-related issues.

Security. This is a pre-requisite for success to ensure access to targeted areas, mobility of children and teachers, transport and delivery of food.

Political context and related vulnerability. Understanding the political interplay that causes vulnerability, and incorporating this into the assessment and scope of school feeding programmes is important to ensure that they effectively cater for those most in need.

Targeting. Often malnourished children are delayed in enrolling at schools or may have dropped out to assist with household income generation. Moreover, targeting schools in the most food insecure areas might not yield the desired returns because these are the schools with least resources. Therefore, building monitoring and surveillance into the project is important to evaluate and understand effectiveness.

Lack of trained teachers. Teachers are often the first to leave an affected area so incentives may be useful, e.g. free food for teaching. Also, classroom overcrowding can be a problem if numbers increase due to the incentive of food. Such problems may need to be anticipated and consideration given to expanding the school or rehabilitating a larger number of rooms.

School accessibility. Schools in less accessible areas are often excluded or may have been destroyed. Alternatives must be found, e.g. UNICEF’s school in a box.

Alternatives to go to school despite their displacement and the lack of school infrastructure (Liberia, DRC and East Timor).

Gender issues. Girls experience war and displacement differently from boys because of their culturally defined social roles and expectations. Girls are often reluctant to attend school when safety concerns exist and are often the first to drop out when family resources become scarce. Their safety may be at risk while commuting to and from school. Drop outs also increase when the head of the household is absent because of war or when both parents are absent, thus adding income generation and sibling care to the already heavy household responsibilities of girls. Gender based educational incentives have worked particularly well in drought affected Pakistan where a WFP assisted programme distributes oil rations for girls attending at least 20 days of schooling in a month. Enrolment increased in participating schools by 76% as a result. The oil ration in Pakistan represents 10% of a poor family’s monthly income.

The author concluded by stressing the importance of keeping schools open in times of crisis for the comprehensive well-being of children and ends with a very personal statement. “In Lebanon, food was not short during the seventeen years of war, hope was. Schools were the most precious source of hope, they maintained our faith in the future.”

2 A school in a box is a portable kit developed by UNICEF and UNESCO. It contains basic school supplies and educational materials for up to 80 children.
Dynamics of livelihood diversification in post-famine Ethiopia

Summary of published paper

Income diversification has been shown to be positively associated not only with wealth accumulation but also with an increased ability to withstand exogenous shocks. The commitment to diversification as an explicit objective within livelihood development strategies assumes that poorest households in risky environments can, and indeed want, to avail themselves of opportunities presented to diversify. As a result, the promotion of off-farm employment as policy has gained widespread support across a spectrum of development agencies from the World Bank to INGOs, especially in countries facing repeated income and consumption shocks. However, according to a recently published study, little is known about how shocks affect diversification over time as households reconsider past choices and adapt to new conditions.

This study sought to identify relevant associations between income diversification, household perceptions of livelihood risks and changes in consumption outcomes over time in post-famine Ethiopia. Four key questions were explored:

i. to what extent did households emerging from the famine period with relatively higher income and calorie consumption levels also have a more diversified income base

ii. was higher income diversification in 1989 associated with a greater increase in diversification by 1994, using a household’s ranking according to income or consumption

iii. which households increased their share of income from non-cropping activities most during the inter-survey years - those already strongly committed to diversification or those previously less diversified

iv. did household heads perceive a lack of non-farm income activities to be an important risk factor in famine vulnerability, and did such perceptions play an identifiable role in determining the nature of their income portfolio

Survey context and approach

In 1989/90 over 500 households were interviewed in 7 communes located in different parts of the country. Communities were purposively sampled according to a range of famine experiences, forms of public intervention, agro-ecologies and ethnic groups. Almost 300 of the original households were revisited in 1994 as part of an expanded survey. The five years straddled by the survey saw improvements in farm output that allowed for fairly rapid post-famine recovery. Part of the increase was due to improved weather and part due to political and economic reforms, e.g. market liberalisation, currency devaluation, land reforms and redistribution, and a period of greater donor support. Households in highland sites increased cereal and non-cereal yields by 40 and 400 per cent respectively. The effects were less dramatic in the lowlands where cereal yields fell and non-cereal yields only improved by 20%.

Cropping provided the main source of earnings for all income groups in both periods. Crop income as a share of total income was 68% among poorest households in the first survey, falling to 58% (statistically significant) in the second. For wealthier households crop income represented only 44% of total income, falling to 41% (not significant) in the second survey.

Mean income rose in real terms from $14 per capita to $39 among poorest households and from $233 to $519 among upper income households during the same period. The share of food in total household expenditure among poorest households was close to 90% in the first period, falling to 73% in the second. Among upper income households, the share fell from 70% to 54 per cent.

Findings and conclusions

Households surviving the famine with higher than average income and food consumption levels also had a more diversified income base and more valuable assets in hand (especially livestock). Analysis of the determinants of diversification at that point in time (1989) indicates that greater income diversification (out of cropping) was positively associated with per capita income level, higher dependency ratios, location in the highlands, and ownership of non-farm assets. No significant association was found between education (literacy) and changes in well-being over time, arguably because there were only minimal opportunities for formal salaried employment in the inter-survey period.

While many households perceived older age of household head and small farm size to be predictors of household risk, such an association was not confirmed empirically. However, most households did believe that earning income outside of cropping was a key to reducing risk. Yet, there was an inverse association observed between female-headed households and diversification despite the fact that female headed households were significantly more likely to believe that off-farm income protects a household against famine.

Nevertheless, the post-famine recovery period was a time of dynamism and change as highlighted by the movement between income and consumption deciles. This suggests that opportunities for change are neither uniformly spread nor captured only by the already wealthy. In fact the households that most increased their flow of non-crop income between the two surveys were the poorest and least diversified in the initial period. By contrast, the already well diversified (in 1989) maintained their level of diversification but still increased their income flow and asset wealth.

The authors summarise the findings by suggesting that complex trade-offs exist between perceptions of risk and diversification practices - trade-offs that vary considerably by household type and location. Furthermore, such differences in household choices and opportunities need to be better understood if development agents are to deliver effectively the benefits of off-farm employment policies to the poor (particularly women farmers) in risky environments.

Research

Needs of host population versus refugees in Tanzania

A paper, presented at the Berlin symposium on Nutrition in the Context of Conflict and Crisis at the 29th session of the SCN, addressed the issue of disparity in the health and nutrition conditions of refugee and host populations in Tanzania.

The author described how the refugee operation in Tanzania aims at providing protection, care and maintenance assistance to about 500,000 refugees in 13 camps. The services provided include water, health, nutrition, food, shelter and sanitation. In the past, according to the author, the Government of Tanzania (GoT) has outlined the sacrifices made by local communities to host refugees at the expense of other risks to themselves. Such risks include insecurity, disease, poor nutritional status, scarce resources, environmental damage and land degradation. About one million local inhabitants live in the refugee-affected areas. They are comprised of subsistence farmers with very low income and relatively high malnutrition, morbidity and mortality rates. Poor farming practices are a major constraint to food production, coupled with poor road infrastructure and inadequate marketing systems. The proximity to refugee camps has influenced the prices of local foodstuffs, and has contributed to deteriorating security and destruction of the natural environment. Although donors continue to provide support for the refugee operation, the GoT bears the main responsibility for hosting the 500,000 refugees.

The health and nutrition situation in the refugee-affected areas, unlike the refugee camps, is a significant public health problem. Malaria, pneumonia and diarrhoea are the major leading causes of mortality and morbidity. The paper highlights the situation through a comparison of the similarities and differences between the refugee and host population, in terms of nutrition and health service provision and conditions (see table).

The author asserts that a number of constraints and dilemmas affect Tanzania’s ability to respond adequately to this situation including:

- inadequate resources to support asylum seekers
- increased insecurity and tensions between the local population and refugees
- donor support is directed to refugees while development support to refugee affected areas is given lower priority
- cross infections from countries of origin to host population
- abrupt reductions in donor support which interferes with provision of basic services creating insecurity to the host population.

Comparison of refugee and host population in terms of nutrition and health service provision and conditions

<table>
<thead>
<tr>
<th>Situation/Activity/Services</th>
<th>Refugees</th>
<th>Host population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>500,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Under-five mortality/1000/live births</td>
<td>54</td>
<td>137</td>
</tr>
<tr>
<td>Infant mortality/1000/live births</td>
<td>32</td>
<td>88</td>
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<tr>
<td>Neonatal mortality/1000/live births</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Maternal mortality/100,000/live births</td>
<td>56</td>
<td>529</td>
</tr>
<tr>
<td>Child wasting, % &lt;2SD</td>
<td>3.2</td>
<td>9.2</td>
</tr>
<tr>
<td>Special feeding programme</td>
<td>Available</td>
<td>Not available</td>
</tr>
<tr>
<td>Micronutrient supplementation</td>
<td>Available</td>
<td>Not available</td>
</tr>
</tbody>
</table>
| Infant feeding in emergencies               | • assessment done  
   • capacity building and community sensitisation | • not done  
   • capacity building and community sensitisation |
| Prevention of low birth weight (LBW) programme | Available | Not available |
| Nutrition survey                            | Conducted yearly | Rarely conducted |
| Control of malaria                          | Indoor spraying twice a year, community sensitisation | Only community sensitisation on use of insecticide treated nets |
| MCH services                                | • growth monitoring  
   • pregnant women receiving supplementary feeding and de-worming | • growth monitoring  
   • no supplementary feeding, no de-worming |
| Parasite control for children               | Program available | No program |
| Water and sanitation                        | • water treated, safe and clean  
   • program for sanitation  
   • latrine coverage >90% | • water not treated, not safe  
   • no program of sanitation  
   • latrine coverage 30-40% |
| IMCI capacity building                      | > 80% of target | 30-40% of target |
| HIV/AIDS program                            | Included in school health and youth programs | Included in youth programs only |

A method for estimating mortality rates in humanitarian emergencies using previous birth history

By Mark Myatt (University College London), Anna Taylor (Save the Children UK) and W. Courtland Robinson (Johns Hopkins University)

Mark Myatt is a consultant epidemiologist and senior fellow at University College London. His areas of expertise include infectious diseases, nutrition, and survey design. He is currently working on a rapid assessment procedure for trachoma prevalence. Anna Taylor is Nutrition Adviser for Save the Children UK, supporting emergency nutrition operations. W. Courtland Robinson is a Research Associate at the Centre for International Emergency, Disaster, and Refugee Studies, School of Hygiene and Public Health, Johns Hopkins University. The contributions of Arafan Mohammed and the rest of the Save the Children Sudan Programme are gratefully acknowledged.

This article proposes a practical method for estimating mortality in emergencies which includes a step-by-step guide to calculations and summarises the outcome of a field test carried out by Save the Children UK in Sudan early this year.

Traditionally, prevalence (e.g. the prevalence of undernutrition) and incidence (e.g. mortality) have been measured using two quite different epidemiological methods. These are:

Prevalence. Cross-sectional surveys such as the modified EPI 30 cluster survey commonly used to estimate the prevalence of undernutrition.

Incidence. Surveilllance (monitoring) systems such as monitoring of burial places; routine reports from, for example, street leaders in refugee camps; routine reports of deaths in hospital from curative services. Surveillance systems usually require a reasonably stable situation and reliable population estimates. They also take a considerable time to establish and need to run for some time before data can be meaningfully analysed. These factors make them unsuitable for estimating mortality in emergency assessments. It is possible to estimate cumulative incidence retrospectively using a cross-sectional survey. This is currently the recommended method for estimating mortality in emergencies. There are, however, problems in this approach with regard to estimating mortality rates:

Manipulation. Any emergency assessment is prone to manipulation by an aid-savvy population or regime. Such manipulation will, generally, lead to an overestimation of incidence but in situations where households are in receipt of a general ration there may be a reluctance to report deaths and this may lead to an underestimation of incidence.

Taboo. In some cultures death is a taboo subject. This makes asking questions about deaths problematic and will lead to an underestimation of mortality.

Unreliability. Many handbooks on emergency assessment mention the importance of estimating mortality rates but provide scant details on exactly how this should be done. Whilst reviewing reports of emergency assessments we found that a variety of methods were used. Many of these assessments committed one or more gross methodological blunders. The most common of these was nesting of the mortality survey with a nutrition survey thereby excluding households in which all children under five years of age had died leading to underestimation of mortality. In general, the methods used lacked standardised procedures for defining households, enumerating household members, selecting the principal informant, ascertaining whether identified household members were living at home during the recall period, failing to define live-births, and not having a standardised question set. This lack of standardisation is likely to lead to large within and between observer variation within a single survey and, perhaps more importantly, large variations between surveys due to methodological problems and inconsistencies rather than to differences in underlying mortality rates.

Difficulties in estimating the size of the denominator. Household census methods require the tracking of a potentially large number of individuals over time, some of whom may move in and out of the household during the recall period (e.g. for work, military service, or to care for a relative in another community). Such individuals contribute a complicated sum of person days to the denominator. Individuals entering and leaving the household during the recall period may also be missed in a household census and contribute nothing to the estimated denominator. This leads to considerable difficulty in obtaining an accurate estimate of the denominator. This difficulty increases with increasing length of the recall period.

Lack of guidance on sample size calculations and data-analysis procedures. Current editions of handbooks on emergency assessment do not provide details on how sample sizes should be calculated. They offer conflicting advice on minimum sample sizes which are couched in terms of a minimum number of individuals or households rather than units of person-time-at-risk (i.e. the product of the number of individuals followed-up and the duration of the follow-up period). Key analytical procedures such as the calculation of a confidence interval on an estimated rate are also not covered in these handbooks.

Given these problems with the way mortality is currently estimated in emergency assessments, Save the Children UK (SC UK) decided to design and undertake preliminary testing of a method that might overcome these problems.

Desirable attributes of a method

The first step in designing the new method was to decide on a set of desirable attributes. After some deliberation, the following list was arrived at:

Familiar sampling method. The new method must be able to use proximity sampling of households as is used in most variants of the EPI 30 cluster method because most workers in the field are already familiar with this method (e.g. it is a commonly used method for assessing the nutritional status of a population in emergency situations). Other methods (e.g. simple random sampling, systematic sampling, stratified sampling, and adaptations of the EPI method) may also be used.

Reliable. The new method must use a standard validated question set applied to a single informant with a single relationship to the deceased.

Low overheads. The new method must have low resource overheads. It must be possible for data to be collected by a single enumerator. The data must also be simple to collect. The method should not require entry of large volumes of data onto computer. The data must be simple to analyse and not require the use of specialist computer software.

Resistance to manipulation and taboo. The intent of a mortality survey using the new method must not be obvious (i.e. it must not be obvious that data is being collected on recent deaths). The question set used must avoid any mention of death.

Robust to denominator estimation problems. The new method must simplify the estimation of the size of the denominator population and should also be robust to denominator changes caused by migration, displacement, or household members working or living away from home.

In addition, it was decided that simple tools for sample-size calculation and the calculation of a confidence interval on an estimated rate should be developed and placed in the public domain. It was decided that these tools should be general to the problem of estimating a single rate rather than being tied to the new method.

Which mortality rate to estimate?

These considerations led to the decision to estimate under five years mortality rather than all-age mortality (crude mortality, CMR). Estimating under five years mortality has the following advantages:

• A single informant with a single relationship to the deceased may be used (i.e. mothers). Restricting the collection of data to mothers and their children simplifies the estimation of the size of the denominator population.

• A standard validated question set (the UNICEF ‘previous birth history’ (PBH) method) is already available. This question set makes no mention of death and has low data collection and analysis overheads. The PBH question set is shown in box 1. The flow of questions in the PBH question set is illustrated in figure 1.

An additional rationale for estimating under five years mortality rather than all-age mortality is that under five years population is an early warning population (i.e. mortality is likely to rise in this population before it rises in

Field article
the general population). Also, under five years mortality is less influenced than CMR by the age structure of the population. Different age structures can make comparisons between different populations meaningless without standardising for age (e.g. developed countries may have higher CMRs than developing countries because they have a higher proportion of elderly persons in their population). Standardisation is likely to require the collection of additional demographic data in emergency situations.

One disadvantage with the proposed method is that maternal orphans are excluded by the requirement that only living mothers are interviewed. It might be expected that the survival probabilities of maternal orphans are considerably lower than children whose mothers are still alive. This will cause any method based on the PBH question set to underestimate mortality. The degree to which this underestimates mortality will depend upon the maternal mortality rate. Underestimation may be a particular problem in situations of exceptionally high maternal mortality coupled with high under five years mortality due to (e.g.) HIV / AIDS or malaria epidemics in areas of unstable malaria endemicity. This problem was not considered in the development and testing of the method reported here. The method is, however, robust to denominator changes caused by migration, displacement, or household members living or working away from home during recall period. Such changes cause problems for CMR estimations methods, which rely on household census methods to estimate the size of the denominator. This robustness is not affected by the length of the survey recall period.

Most emergency handbooks concentrate on collecting data to estimate both crude mortality and under five years mortality. This approach is superficially attractive but is subject to the problems of manipulation, taboo, and unreliability mentioned earlier. Estimates of under-five mortality from such surveys are likely to lack precision due to inadequate sample sizes.

It should be noted that under five years mortality is not an appropriate indicator for initial assessments undertaken where considerable under five years mortality has occurred prior to the start of the follow-up period (e.g initial assessments undertaken very late in an unameliorated nutritional emergency), or in situations where mortality is likely to be highest in the adult or elderly population.

Data arising from the PBH question set

The PBH question set yields three variables per mother. These are:

- The number of children at risk
- The number of new births in the survey period
- The number of new deaths in the survey period

Such a small number of variables allows data collected from each mother to be summed by hand. Cluster or community level tallies can also be summed by hand. It is even possible to sum the cluster level tallies and calculate mortality rates directly, although calculation of confidence intervals is complicated if a multi-stage sample (e.g. cluster) sample is used. Hand calculation of mortality rates for the adult or elderly population.

Analysing the PBH data

Survey level totals plug directly into the standard mortality estimation formula:

\[
\text{new deaths} \times \text{rate multiplier} = \frac{\text{children at risk} - \frac{1}{2} \text{new deaths} + \frac{1}{2} \text{new births}}{\text{children at risk}}
\]

The rate multiplier is the reference population (e.g. per 1,000, per 10,000) divided by the number of periods of follow-up (e.g. 90 days).

Calculation of confidence intervals relies on:

\[
\text{children at risk} = \frac{1}{2} \text{new deaths} + \frac{1}{2} \text{new births}
\]

being a proportion or period prevalence. Confidence intervals for a proportion from a two-stage cluster sampled survey may be calculated using the standard formula:

\[
95\% CI = p \pm 1.96 \sqrt{\frac{p(1-p)}{k(k-1)}}
\]

Where:

- \( p \) = proportion observed in whole sample
- \( p_i \) = proportion observed in cluster \( i \)
- \( k \) = number of clusters

Use of this formula accounts for variance loss due to the use of a two-stage sampling method. The format of the data and the equations required to calculate rates and confidence
intervals are simple enough for all calculations to be performed using standard spreadsheet packages. Figure 2 shows an example spreadsheet created using Microsoft Excel. This spreadsheet is available (in Microsoft Excel ‘95 format) from:

http://www.myatt.demon.co.uk/samplerate.htm

This is a general tool and may be used to calculate rates and confidence intervals on count data collected using a two-stage cluster sample collected.

Sample size calculation

Required sample sizes can be calculated using the standard formula:

\[ n = \frac{\mu}{\epsilon^2} \]

Where:

- \( \mu \) = rate
- \( \epsilon \) = required size of standard error

For example, the sample size required to estimate a mortality rate of 2/10,000 persons/day with a 95% confidence interval of ±1/10,000 persons/day using simple random sampling is:

\[ n = \frac{2}{(0.0001 / 1.96)^2} = 76,832 \text{ (PDAR)} \]

This person-days-at-risk (PDAR) figure may be expressed as the number of children for which survival data should be collected by dividing the PDAR by the length of the follow-up period:

\[ n(\text{children}) = \frac{\text{PDAR}}{\text{length of follow-up period in days}} \]

For example, with a follow-up period of 90 days, data on the survival of 854 children is required:

\[ n(\text{children}) = \frac{76,832}{90} = 854 \]

This may be expressed as the number of mothers that should be interviewed, by dividing this figure by an estimate of the average number of children under-five per mother alive at any time during the follow-up period:

\[ n(\text{mothers}) = \frac{n(\text{children})}{\text{avg No. of children < 5 years per mother}} \]

More complex sampling strategies (e.g. the EPI 30 cluster method) can be accommodated by multiplying the calculated sample size by the expected design effect (usually estimated to be 2.0).

A sample-size calculator that implements the PDAR calculation has been developed and placed in the public domain. The sample size calculator is available from:

http://www.myatt.demon.co.uk/samplerate.htm

The sample-size calculator is a general tool for use with any survey that estimates a single rate.

Experiences in the field

A preliminary test of the proposed method was undertaken in four food economy zones (FEZ) in Northern Darfur, Sudan in January and February 2002. The beginning of Ramadan was used as the start of the recall period. Data was collected using a two stage cluster sample. Sample size requirements were calculated as follows:

For each test survey, data was collected using 38 clusters of 26 mothers (one extra cluster was sampled to ensure that the sample size requirement was met even if one or two clusters were located in communities with less than 26 mothers). The required sample size was met in three of the four food economy zones (table 1). The expected design effect of 2.0 that was used to calculate the required sample size proved to be an overestimate and the sample sizes collected were sufficient to estimate the expected rate with a precision better than the specified ±1/10,000 persons / day.

The following procedures and definitions were used in the surveys:

- All women in the reproductive age range in a selected household were questioned.
- Births were defined as live births. A distinction was made between live births and still births or miscarriages. Live born children were defined as those born alive even if the child died immediately after birth. A baby who cried or breathed, if only for a few minutes, counted as a live birth.

The results of these surveys are summarised in table 1. It was not possible to validate these results by comparison with surveillance data. However the mortality rates reflect the findings of nutrition surveys undertaken at the same time in the same villages (i.e. the Tombac area was characterised by higher prevalence of undernutrition by MUAC than by weight-for-height z-scores, and a high prevalence of oedema).

Data proved both easy and rapid to collect with enumerators taking no longer than the teams measuring children for concurrent nutrition surveys. Data analysis was also straightforward.

Further work

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Table 1: Results of for retrospective mortality surveys in North Darfur, February 2002

<table>
<thead>
<tr>
<th>FEZ</th>
<th>Child days at risk</th>
<th>Percentage of sample size met</th>
<th>Rate / 10,000 / day (95% CI)</th>
<th>Design effect</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goz</td>
<td>162,891</td>
<td>106%</td>
<td>0.92 (0.40, 1.44)</td>
<td>1.11</td>
<td>Normal</td>
</tr>
<tr>
<td>Tombac</td>
<td>166,536</td>
<td>108%</td>
<td>3.78 (3.07, 4.49)</td>
<td>0.77</td>
<td>Elevated - possibly serious situation</td>
</tr>
<tr>
<td>Pastoral</td>
<td>178,432</td>
<td>116%</td>
<td>0.23 (0.02, 0.43)</td>
<td>0.91</td>
<td>Normal</td>
</tr>
<tr>
<td>Non-wadi</td>
<td>139,435</td>
<td>91%</td>
<td>0.65 (0.25, 1.05)</td>
<td>0.95</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Table 2: Benchmarks for the interpretation of mortality rates

<table>
<thead>
<tr>
<th>CMR deaths / 10,000 day</th>
<th>USMR deaths / 10,000 day</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>1</td>
<td>Normal rate</td>
</tr>
<tr>
<td>&lt; 1</td>
<td>&lt; 2</td>
<td>Elevated, cause for concern</td>
</tr>
<tr>
<td>1 – 2</td>
<td>2 – 4</td>
<td>Elevated, serious situation</td>
</tr>
<tr>
<td>&gt; 2</td>
<td>&gt; 4</td>
<td>Elevated, very serious situation</td>
</tr>
<tr>
<td>&gt; 5</td>
<td>&gt; 10</td>
<td>Elevated, major catastrophe</td>
</tr>
</tbody>
</table>

Validate the estimates arising from the proposed method. This may be easiest to do in a refugee camp where routine monitoring of deaths is undertaken. Validation should be a relatively rapid process given that random or systematic samples may be used. Other overheads (e.g. travel costs) should also be low.

Establish reasonable design effects for use in sample size calculations. The pilot surveys used an expected design effect of 2.0 in order to calculate the required sample size for each survey. This produced estimates with a reasonable degree of precision. The test surveys presented here yielded negligible design effects. It is possible that, as experience with the method grows, the expected design effect may be revised downward thus reducing costs.

Establish benchmark values for the interpretation of under five years mortality. The benchmarks that are currently used to interpret under five years mortality are derived by doubling those used to interpret crude mortality (table 2). Under five years mortality may be subject to higher regional variation than crude mortality and simple global benchmarks may prove inappropriate. This problem may be assessed by a desk review of mortality data and appropriate benchmarks developed.

Use of the methods with alternative sampling methods. The EPI survey method is limited to producing an overall estimate of mortality for a survey area. If estimates of mortality are required at village level then other sampling strategies (e.g. sequential sampling plans) could be used. At present there is no experience with using the proposed method with alternative sampling methods.

For further information contact: Mark Myatt, Consultant Epidemiologist & Senior Research Fellow, The Institute of Ophthalmology, University College London. Unit B, Station Building, Lindfield Road, Pwys SY18 6EB, UK or Anna Taylor, SCU Field article.
Measuring mortality rates in cross-sectional surveys: a commentary

Bradley A. Woodruff, MD MPH, Medical Epidemiologist
International Emergency and Refugee Health Branch
U.S. Centres for Disease Control and Prevention

Congratulations to Mark Myatt, Anna Taylor, and W. Courtland Robinson for bringing into the light of rational scientific discussion the important issues of estimating mortality rates using cross-sectional surveys. Although frequently done, retrospective estimation of recent mortality has been the subject of relatively little discussion or research. Those techniques most frequently used in non-emergency situations, such as sisterhood methods of estimating maternal mortality, produce estimates of mortality for the relatively distant past which are of less use in emergency situations. Also, thanks to Mark Myatt, there are now easy-to-use computer programs to calculate the sample sizes needed to estimate mortality rates in cross-sectional surveys and to calculate mortality rates and their associated confidence intervals. These are all major steps forward.

Nonetheless, it should be kept in mind that monitoring mortality rates is best done prospectively using mortality surveillance, and that mortality surveillance should be implemented as soon as possible in emergency situations. Ongoing surveillance can produce much more timely estimates of mortality rates than is possible with retrospective methods, thus allowing more timely public health decisions. In addition, surveillance, because it involves ongoing, continual data collection, allows more expedient monitoring of trends than is possible with repeated surveys. Nonetheless, surveillance is sometimes not yet functioning early in emergencies or public health personnel may wish to estimate mortality in the past before surveillance data were collected. In these cases, retrospective mortality estimates from cross-sectional surveys can be very valuable.

There is as yet no standard method for retrospective estimation of mortality rates. Three basic methods have been commonly used. The previous birth history (PBH) method is well described by Myatt et al. It measures mortality among children less than 5 years of age. At least two additional methods allow estimation of mortality rates in all age groups. One method, sometimes called the past household census method, asks an adult respondent in each selected household to list all persons who lived in that household at some distinct point in the not-too-distant past. The interviewer then asks what has happened to each of these persons. This method, like the PBH method, does not require asking directly about deaths in the household. Another method, sometimes called the current household census method, asks an adult respondent to enumerate the current members of the household, and then asks how many people in the household have died since a point of time in the past. All three of these methods, and others, need to be compared to each other and to some gold standard measure of mortality in order to measure their relative validity. Myatt et al present an excellent plan for the necessary validation studies to achieve this goal.

The discussion by Myatt et al of the desirable attributes of any retrospective method is a valuable start to an ongoing discourse, but there is little empirical evidence supporting the importance of some of these attributes. For example, the importance of a taboo in discussing death may vary greatly depending on the religious and cultural beliefs of survey subjects. Also, the level of simplicity required in data collection and analysis procedures will vary greatly depending on the experience and training of survey personnel. Moreover, the necessity of having a single relationship between the survey respondent and the deceased is not proven. In nuclear families, any adult may be able to provide equally valid data on deaths in that household.

Regardless of the method, the techniques used to choose the sample, conduct the interviews, and analyse the data are crucial to obtaining valid results. The PBH method may result in greater non-response than other methods because it requires that a specific person, the mother of children less than 5 years of age in the household, be present in the household at the time the survey team visits. Other methods allow interviews to be conducted with any adult member of the household. Of course, well-standardised and validated questions should be uniformly posed during all interviews, and the PBH method uses such questions. Households to be included in the survey sample must be chosen randomly by a method which minimises the influence of survey team members. Myatt et al present various alternative sampling methods; however, various studies have demonstrated that the type of proximity sampling recommended by the Expanded Programme on Immunisation (EPI) can result in substantial bias. Data analysis must be appropriate for the sampling the subject of estimating maternal mortality. Mark Myatt’s spreadsheet is an excellent tool for appropriate analysis of data obtained by cluster sampling.

One clear advantage of the household census methods over the PBH method is the ability to measure crude mortality or age-specific mortality in age groups other than children less than 5 years of age. Although Myatt et al are correct in pointing out that young children are appropriately considered a sentinel group in most emergencies, there may be situations where an estimate of crude mortality or age-specific mortality in other age groups is desired because persons other than children less than 5 years of age are suspected of being at greatest risk of mortality. In such cases, the PBH method cannot be used.

Certain basic sources of bias may play a role regardless of the method used to retrospectively estimate mortality in cross-sectional surveys. The first such bias is survivor bias. Retrospective collection of mortality data will produce underestimates because mortality is generally lower in households with survivors than in households where everyone has died. Myatt et al have pointed out the survivor bias in the PBH method will be especially strong in populations with high maternal mortality. Similarly, for methods estimating crude mortality using the entire household as the denominator, data will not be collected from households where all members have died. As Myatt et al have pointed out, the survivor bias in the PBH method will be especially strong in populations with high maternal mortality. Similarly, for methods estimating crude mortality using the entire household as the denominator, survivor bias will be especially important in situations with very high crude mortality or where mortality is strongly clustered in households. Such clustering may occur when mortality is largely due to violent attacks on specific households. Nonetheless, such bias may be less important in situations without these conditions.

A second bias which complicates all mortality measurements is recall bias. Mothers or other adults may not accurately recall the occurrence of deaths in children or other household members. Of course, if deaths are not remembered or not reported to interviewers, mortality rates will be underestimated. On the other hand, if respondents incorrectly recall deaths as occurring more recently than they actually occurred, mortality during a specific, recent recall period will be overestimated. Although mothers might be expected to recall deaths of their children better than adult household members, the deaths of any household member, the PBH method may still be somewhat more susceptible to recall bias because it requires respondents to place births and deaths in time relative to two different points in the past (to determine if a birth occurred within the prior 5 years and if a death occurred since the beginning of the recall period).

A third potential bias is misclassification bias; it can affect either the numerator or denominator of mortality rates. For example, in order to be included in the numerator or denominator of a mortality rate, a person must have been born alive, which is usually defined as having taken at least one breath after delivery. Therefore, stillbirths should not be counted as a live person nor as a death. Survey subjects reporting stillbirths as deaths will overestimate mortality. Failing to report deaths of live-born infants will underestimate mortality rates. As Myatt et al appropriately stress, interviewers must use standard case definitions when counting both living persons to be included in the denominator and deaths to be included in the numerator.

Unfortunately, all methods used to gather retrospective mortality data may be subject, to some extent, to various complications of sampling, data collection, and potential bias. The relative importance of these difficulties when using the various methods of mortality estimation in cross-sectional surveys needs to be much better studied before one method can be recommended over the others. Myatt et al have begun an important discussion of these issues which should be expanded and reinforced by the empirical findings of well-conducted comparison studies.
World Food Summit dubbed ‘Summit of the Poor’

The BMJ news section recently carried a small item on the World Food Summit held in Rome in June 2002.1 The report stated that heads of state and other officials from more than 180 nations reiterated their plans to halve the number of the world’s hungry from 800 million to 400 million by 2015.

The summit was an attempt to raise more funds for the initiative first mooted five years ago. However, the meeting was dubbed ‘the summit of the poor’ by Dr Jacques Diouf, FAO director (who organised the summit) because so few western leaders attended. The only two top ranking politicians from the 29 countries in the OECD were Italy’s Silvio Berlusconi, hosting the summit, and Spain’s Aria Anza, obliged to attend because Spain holds the EU’s rotating presidency.

Regarding the poor OECD attendance, Dr Diouf said ‘if we exclude certain exceptional national circumstances, we still have a good indicator of the political priority that is given to the tragedy of hunger’.

1 BMJ (2002) vol 324, 22 June, pp 1476

Supporting Learning During the Current Relief Operations in Malawi

A LNAP (the Active Learning Network for Accountability and Performance in Humanitarian Action) has just commenced an operational test of its Learning Support Office (LSO) concept in Malawi. The test, which runs from October 2002 to March 2003, will be subjected to a real-time evaluation to assess the extent to which it benefits the performance of the operations and the effectiveness of the different learning techniques employed. In-country hosting support is being provided by the Malawi Red Cross.

The first activity being undertaken is to facilitate a process of expanding and refining the guidelines on community-based food distribution being used by the Joint Emergency Food Aid Programme (JEFAP) Consortium, comprising WFP, CARE, Malawi Red Cross, CRS, Oxfam, World Vision, SC-UK, SC-US, Africare, Salvation Army, Emmanuel International, GOAL, and Concern Universal. The process involves a series of workshops for Field Officers of JEFAP member agencies to help draw lessons from the initial round of distributions. Lessons from community-based general food distribution in other operations are being collated from documents in the LSO’s comprehensive Resource Centre collection.

The principal output planned for early November is a practical manual tailored to the specific context of Malawi that covers the whole distribution cycle, from community sensitisation to post-distribution monitoring. Other activities include video filming at distribution sites to facilitate peer exchange and learning between agency personnel, and tailored training programmes (planned in conjunction with RedR). Other forms of learning support to the Government of Malawi and to agencies involved in relief and recovery activities are also being developed.

The LSO’s Project Director (John Borton) encourages readers of Field Exchange to visit the LSO team at Taurus House (off Convention Drive) in Lilongwe or contact him at john@lsomalawi.org. The LSO website, which contains an extensive web bibliography, is at www.losomalawi.org.
Food and Nutrition Specialists Register for Work in Developing Countries

Nutrition Works and International Health Exchange (IHE) are working in partnership to provide a register of food and nutrition specialists. This will allow relief and development agencies central access to qualified individuals to work on their programmes in developing countries.

If you have expertise in: public nutrition, nurse/nutrition, food security, food aid and are available for either long or short-term postings or consultancy work we would like to hear from you.

Posts may include the management or implementation of food distribution and feeding programmes (therapeutic and supplementary), food security assessments, nutritional surveys, project planning and evaluation.

The register is currently funded by: Concern Worldwide, Oxfam, Partnership Child Development, Save the Children, UNHCR and is accessed by many others.

Candidates will be interviewed and feedback and advice are offered.

For further information and an application form, please send your CV and contact details to:
tel: +44 (0) 207 620 3333. email: pat@ihe.org.uk

ReliefSim: Computer-based simulations for training humanitarian workers

Forced Migration Online (FMO) at the Refugee Studies Centre, together with Technology Assisted Lifelong Learning (TALL), both at the University of Oxford, and the Columbia Centre for New Media Teaching and Learning (CCNMTL) at Columbia University are currently undertaking a two year joint pilot study to develop simulation models for training humanitarian workers in the procedures needed for the management of complex emergencies, in particular in refugee situations. One of the key areas being targeted is nutrition.

These models will provide practitioners and students with the opportunity to solve problems, analyse situations, recommend future actions and deal with complex environments such as establishing new relief camps.

ReliefSim is the first of its kind to apply complex modelling technology to relief settings. It will both adhere to best pedagogic practice in eLearning and support the minimum standards as described in existing publications such as the Sphere Project, Médecins Sans Frontières’ Refugee Health and the UNHCR’s Handbook for Emergencies.

ReliefSim Digital Library

One of the innovative developments in the production of ReliefSim will be the digital resource bank to be produced as part of the simulation package. This will include annotated, navigable ebook versions of the major standards publications described above, as well as relevant full text documents from the FMO digital library. On the CD ROM version, these will be provided with a free ebook reader and search facility.

For users with Internet access, ReliefSim will become a front end to the FMO digital library and portal, guiding users to the resources they need quickly and easily.

Progress so far

An advisory group of practitioners and academics from key organisations in the field has been helping the ReliefSim team to build content and create scenarios for the simulation. The learning technologies at TALL in Oxford are investigating the pedagogic and training issues, and the building of the simulation models is being led by CCNMTL with input from the whole team.

For further information, please contact: Refugee Studies Centre, Queen Elizabeth House, University of Oxford, 21 St Giles, Oxford, UK. Tel: +44 (0)1865 270267. email: fmo@qeh.ox.ac.uk. Web: www.forcedmigration.org

Forced Migration Online: A world of information on human displacement

A comprehensive electronic information system for refugee and forced migration studies is currently being developed by the Refugee Studies Centre (RSC), University of Oxford, in collaboration with a number of partner institutions. Forced Migration Online (FMO) will provide instant access to a wide variety of online resources concerning the situation of forced migrants worldwide.

Designed for use by practitioners, researchers, policy makers, students, the media or anyone interested in the field, FMO aims to give comprehensive, impartial information and to promote increased international awareness of human displacement issues. FMO defines forced migration broadly, encompassing displacement as a result of disasters, development initiatives and evictions, as well as conflict (refugees and internally displaced people).

The resources available on FMO will include:

• A digital library of full text documents and journal articles which can be read online, searched and printed as required
• A searchable catalogue with descriptions of relevant resources in the field of forced migration and links to those resources
• A search facility allowing simultaneous searching of websites, library catalogues, online databases and other electronic resources
• A browse facility which will allow users to access thematically-grouped sets of resources
• Thematic (including nutrition) and country/population-specific guides to conducting research on forced migration issues with pointers to further information available on the web
• A comprehensive database of key organisations in the field
• A news feed with regularly updated highlights
• Visual and audio-visual materials such as maps, photographic images and videos
• Full back runs of academic journals in the field, such as International Migration Review and Disasters
• Online teaching resources

FMO will be available online from 21 November 2002 at www.forcedmigration.org.

For further information, please contact the FMO team at: Refugee Studies Centre, Queen Elizabeth House, University of Oxford, 21 St Giles, Oxford, UK. Tel: +44 (0)1865 270267. email: fmo@qeh.ox.ac.uk. Web: www.forcedmigration.org

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For further information, please contact: Refugee Studies Centre, Queen Elizabeth House, University of Oxford, 21 St Giles, Oxford, UK. E-mail: reliefsim@qeh.ox.ac.uk
New Software for Field Research and Analysis of Qualitative Data

AnnoTape (‘Annotated Tape’) is recently developed software which is rapidly finding use as a field research tool in difficult settings. AnnoTape turns a standard laptop - PC or Mac - into a powerful platform for recording and analysing qualitative research data, whether text or audio (such as interviews). The newly released AnnoTape 2.0 for Macintosh also adds video and image data.

Using AnnoTape, researchers working in areas such as humanitarian evaluation or human rights can record interviews straight onto their hard disks as audio files. Then, rather than having to transcribe those interviews before analysing them, the user simply ‘marks up’ or indexes key moments within the interviews using AnnoTape, giving them labels such as ‘indicators of malnutrition’ or ‘causes of displacement: local violence’. Textual materials - whether the user’s own field notes, agency reports or news briefings - can also be imported and marked up in the same way. All the records are held together in a project database and can be instantly and easily searched, reviewed and analysed at the touch of a few keys.

AnnoTape is widely used by qualitative researchers around the world, particularly in the health sciences, sociology and anthropology. For more information and to download a free 30-day demo version, visit the AnnoTape website at http://www.annotape.com or email annotape@eircom.net.

Managing Interventions in Complex Emergencies
A Course for Managers of Refugee and Relief Operations

The Feinstein International Famine Centre at Tufts University is holding a two week intensive course for humanitarian program managers focusing on nutrition, public health and community-based animal health interventions in complex emergencies. In addition to these foci, specialists in gender, humanitarian law, rights and principles and livelihoods will offer in-depth sessions. Geared to country directors and program managers of relief operations in conflict and forced displacement settings, the course will cover:

• the current debates & latest thinking on issues of humanitarian policy and practice
• training in IHL/human rights/principles and standards (SPHERE, Red Cross/NGO Code of Conduct)
• social, political and economic analyses as well as gender and generation-sensitive frameworks of analysis and response
• skill building in public nutrition, public health, livestock, livelihoods and water and sanitation interventions
• the UN program methodologies, United Nations inter-agency consolidated appeal processes and coordinating mechanisms (e.g. OCHA)

The course is scheduled to take place in Dubai, United Arab Emirates, December 8-21, 2002.

For further information, including rates and application forms, please contact Estrella Alves at Winter Programs, Feinstein International Famine Centre, 96 Parkward Avenue, Medford, MA 02155 USA; tel: 1-617-627-3423; fax: 1-617-627-3428; email: estrella.alves@tufts.edu; web: www.famine.tufts.edu

Invite to make the most of your experiences at Oxford Brookes University

A s Head of the Department of Human Biology, Food Sciences and Nutrition at Oxford Brookes University, Professor Jeya Henry is involved in both research in international nutrition and teaching on undergraduate and postgraduate courses. His department is aware that valuable nutrition data and experiences gathered by NGO workers often have limited physical space to work on return from work overseas, or may lack the necessary technical support to make the most of data collected and evaluations made or to write-up experiences. Such analysis has the potential to promote individual learning and development, and at the same time contribute to our overall knowledge of the reality of working in emergencies.

To this end, Professor Henry extends an invite to individuals needing a quiet corner of the globe, to contact him, with a view to his department offering space to evaluate or write-up findings in a conducive environment with academic support. He is open to ideas and flexible time-frames, so if you have nutrition data that you want to work on but don’t quite have the wherewithal or have research ideas that you want to formulate but haven’t quite got there, give him a call. Enquiries from individuals outside the UK are most welcome and encouraged.

For further information, contact: Professor J Henry, School of Biological and Molecular Sciences, Oxford Brookes University, Headington, Oxford, OX3 0BP, UK; tel: +44 (0)1865 483295 email: jhenry@brookes.ac.uk; web: www.brookes.ac.uk

Unicef sets up programme to prevent sex abuse by aid workers

A gencies working to relieve famine in southern Africa have embarked on a comprehensive training scheme to educate employees to avoid child abuse. The inter-agency taskforce, consisting of Unicef, Save the Children, and the World Food Programme, have embarked on this educational scheme for both local and international staff. This is to prevent a repeat of the widespread sexual abuse of children by aid workers reported during the recent west African refugee crisis (Guardian, 2002, Feb 28, p 1 and Field Exchange, Issue 15, p15).

Stressing the UN policy of ‘zero tolerance’, Unicef Zambia’s representative Stella Goings stated how appalled the humanitarian aid community were when news of the sex for aid scandal in west Africa first broke. She warned that the impact of the drought across southern Africa has been worsened by AIDS, which has ravaged not just millions of lives and livelihoods across the region but destroyed normal family life, leaving children open to abuse. Citing the case of Zambia, she reported how traditional coping mechanisms such as the extended family have been eroded by the dual impact of AIDS and poverty. Child headed households and grandmothers are sometimes the only remnants of entire families and are highly vulnerable to abuse, with no one to offer protection and guidance.

Malnutrition in Malawi and Guinea

Compared to Ethiopia in 1985, where there was an acute emergency caused by war and drought, the situation in Malawi and Guinea was comparatively stable although health and nutritional conditions were extremely poor (see table 1).

Survey data showed that malnutrition was prevalent in both countries. In Malawi, 7% of the children under five suffered from global acute malnutrition (Wt/Ht z score < 2) and 48% from chronic malnutrition (Ht/age z score < 2). In Upper Guinea, a region in Northern Guinea, the figures were 17% and 40% respectively. In absolute figures this meant that during this time, there were more than 80,000 children in Malawi and about 25,000 children in Upper Guinea affected by acute malnutrition.

In Lilongwe Central Hospital in Malawi it was common for approximately 60 out of the 200 beds available for children to be occupied by cases of severe malnutrition. Malnutrition, and not malaria, was the leading cause of death. Despite the high prevalence of malnutrition in Upper Guinea, malnourished children were rarely admitted with this diagnosis to the five hospitals of the region. However, a survey at the Regional Hospital of Kankan showed that up to 20% of the admitted children actually had underlying signs of acute malnutrition.

Malnourished children in Malawi and in Guinea were predominantly aged between nine months and three years. Risk factors for children admitted with severe malnutrition were poverty, poor weaning diets, maternal illness and early weaning due to new pregnancy of the mother.

Challenges to nutritional rehabilitation

When I first began working in Malawi and Guinea, nutrition programmes in both countries (which were initially supported by several donors) had almost collapsed. In Malawi, the hospital received some irregular milk supplies from the World Food Programme (WFP). In Guinea, malnourished children received no special foods at all in the hospital but advice was given to feed the children with protein rich foods. They did receive some medical treatment (antibiotics, vitamins, intravenous infusions).

However, in both countries the majority of mothers were not able to afford milk products or other food containing animal proteins. Medical personnel were poorly motivated and discouraged because children with malnutrition either died or absconded. In Malawi, hospital staff were scarce and over worked. Therefore, it was common practice not to include malnourished children in daily rounds. Tube feeding was only carried out in severe cases and mothers generally did not accept this practice.
In order to establish effective nutrition rehabilitation programmes, it was recognised that it was necessary to adapt the programme to local conditions. The main challenges in both countries were lack of food supply, low motivation, and poor education of staff. Programme organisation and supervision proved key factors in improving outcomes.

**Food supply**

The first challenge was to establish a regular supply of nutritious food. In both countries it was not possible to rely on families to buy milk based foods. Mothers may have been willing to do so in the initial phase of rehabilitation, but the great majority of them could not afford to do so for the whole initial phase. With about 60 malnourished children starving in the hospital in Malawi, I approached several donor organisations. I learnt that resourcing programmes to treat malnutrition in a non-emergency situation did not fit easily into donor funding mechanisms, i.e. they either wanted to fund treatment programmes for malnutrition in the context of an emergency programme or preventive food security measures as part of a development programme. The hospital administration in both countries felt responsible for the medical care of severely malnourished children but not for their nutrition. These children were therefore falling through the net.

In Malawi, WFP projects had been phased out gradually although they still irregularly supplied some milk powder, oil, cereals, and beans to the hospital. After 20 years WFP wanted to invest in preventive measures as “the old programme had not changed the situation and was not sustainable”.

In Guinea, an NGO had supplied food for a nutrition rehabilitation programme some years ago. After the end of the NGO engagement, the programme had collapsed due to lack of basic foods.

Both experiences demonstrated that donor provision of therapeutic foods was not a sustainable approach to the treatment of severe malnutrition in children.

After intensive negotiations and lobbying, hospital administrations in both countries acknowledged that food was an essential part of a nutrition rehabilitation programme and therefore had to be given equal importance to the provision of drugs. Drugs were supplied free to patients in Malawi and in Guinea - payment for them was included in the admission fees. Both hospitals therefore agreed to supply food to children with severe malnutrition if the parents could not afford to pay for them. A fixed budget for this was allocated to the programme on a monthly basis. The total amount for this was small and did not allow for the purchase of F75 or F100. In Malawi, milk powder, oil and corn flour could be purchased by bulk order. In Kankan (Guinea), the price for milk powder exceeded the available resources. Thus, an alternative liquid diet based on locally available peanuts (peanut milk) was introduced.

### High Energy Peanut Milk

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanut paste</td>
<td>6 soup spoons</td>
</tr>
<tr>
<td>Sugar</td>
<td>14 pieces or 14 coffee spoons</td>
</tr>
<tr>
<td>Water</td>
<td>1000 ml</td>
</tr>
<tr>
<td>Banana</td>
<td>1 piece</td>
</tr>
</tbody>
</table>

100 ml of peanut milk contains 82 kcal

The peanut milk was well tolerated. Although the number of children evaluated is small (ten children), it was evident that most children showed a good weight gain under this regime (see table 2). Restoration of appetite was prompt. Side effects were not seen and existing diarrhoea came to a rapid end. Unfortunately our project was terminated at the end of 2000, for reasons outside the ambit of this article, disrupting the evaluation such that no further data are available to date.

### Training and motivation of staff

The second challenge was to convince staff that malnutrition is treatable in high percentage of cases, that cure rates can be increased, and that relapses need not be the norm.

Staff in both hospitals received refresher training in the management of malnutrition. Basic knowledge was very low, especially in Guinea. However, we soon realised that theoretical knowledge alone did not have the desired impact and that on the job training had a much higher impact on overall performance. Motivation seemed to be strongly dependent on the experience of having successfully treated malnutrition. Thus a precondition for the motivation of staff was the employment of at least one experienced staff member to start and supervise the new programme. The first child who smiled after being cured from Kwashiorkor soon convinced the rest of the team.

### Organisation and supervision

In both countries, organisation and supervision of the nutrition programme was not easy. The necessary food supplies had to be procured, some additional staff were employed, and treatment guidelines were elaborated.

Supervision of food intake and clinical practices by medical and paramedical staff was very important. The intake was recorded on special surveillance forms at each feed. Clinical examination of non-responders was carried out promptly and frequently revealed treatable infections. During feeding, mothers and children were sitting in a circle. This facilitated supervision and helped newcomer parents to learn from the more experienced mothers. If the child’s intake was not sufficient, the remaining feeds were given by nasogastric tube. Mothers themselves administered the feeds via the tubes.

In Guinea the child was weighed every second day and medical examination performed during the daily ward rounds. Due to scarcity of staff, ward rounds could only be carried out three times a week in Malawi. Opportunistic education of mothers was an integral part of each contact with staff. Supervision of feeding by paramedical staff was an occasion to talk about nutrients, the causes of malnutrition, and the need for frequent, adequate feeds. During ward rounds, the mothers learned how to treat diarrhoea and vomiting, or how to suspect infections etc. Mothers participated in the preparation of food and thus learned how to prepare the food.

### Adaptation of guidelines

Adaptation of the nutrition programme generated many technical problems to solve. Given the scarcity of resources, malnutrition treatment guidelines had to be adapted to the local situation.

According to WHO recommendations severe malnutrition should be diagnosed using weight for height measurements and indexes.5 Although the local authorities in both Malawi and Guinea reinforced these recommendations, measuring equipment was not available in many of the health centres, and staff were not using it where it was present. There were no means to supply the necessary equipment or to motivate all staff to use it. In cooperation with the local health authorities it was therefore decided to use the weight/age ratio at health centres for detection of malnutrition and to follow up at therapeutic feeding centres using the weight for...

### Table 1: Basic social indicators of Malawi and Guinea

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Malawi</th>
<th>Guinea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>10,548,250</td>
<td>7,613,870</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>1.5% (2001 est)</td>
<td>1.96% (2001 est)</td>
</tr>
<tr>
<td>Birth rate (1000 population)</td>
<td>37.8 (2001 est)</td>
<td>37.8 (2001 est)</td>
</tr>
<tr>
<td>Death rate (1000 population)</td>
<td>22.81 (2001 est)</td>
<td>17.53 (2001 est)</td>
</tr>
<tr>
<td>Infant mortality rate (1000 live births)</td>
<td>121.12 (2001 est)</td>
<td>129.03 (2001 est)</td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td>37.08 years</td>
<td>45.91 years</td>
</tr>
<tr>
<td>Male</td>
<td>36.61 years</td>
<td>43.49 years</td>
</tr>
<tr>
<td>Female</td>
<td>37.55 years</td>
<td>48.42 years</td>
</tr>
<tr>
<td>Total fertility rate children born/woman</td>
<td>5.18 (2001 est)</td>
<td>5.39 (2001 est)</td>
</tr>
<tr>
<td>HIV/AIDS adult prevalence rate</td>
<td>15.96% (1999 est)</td>
<td>1.54% (1999 est)</td>
</tr>
<tr>
<td>People living with HIV/AIDS</td>
<td>800,000 (1999 est)</td>
<td>55,000 (1999 est)</td>
</tr>
<tr>
<td>HIV/AIDS - deaths</td>
<td>70,000 (1999 est)</td>
<td>5,600 (1999 est)</td>
</tr>
<tr>
<td>GDP - real growth rate</td>
<td>3% (2000 est)</td>
<td>5% (2000 est)</td>
</tr>
<tr>
<td>Per capita purchasing power parity</td>
<td>$900 (2000 est)</td>
<td>$1,300 (2000 est)</td>
</tr>
<tr>
<td>Population below poverty line</td>
<td>54% (FY90/91 est)</td>
<td>40% (1994 est)</td>
</tr>
<tr>
<td>Inflation rate (consumer prices)</td>
<td>29.5% (2000)</td>
<td>6% (2000 est)</td>
</tr>
<tr>
<td>Acute malnutrition (W/H : &lt; -2SD)</td>
<td>7% (1995)</td>
<td>9.6% (Upper Guinea, 1999)</td>
</tr>
<tr>
<td>Chronic malnutrition (H/age : &lt; -2SD)</td>
<td>48% (1995)</td>
<td>28% (Upper Guinea, 1999)</td>
</tr>
</tbody>
</table>

### Table 2: First results of the nutrition rehabilitation treatment with peanut milk in Kankan, Guinea, August to September, 2000

<table>
<thead>
<tr>
<th>Regime</th>
<th>Improvement (weight gain, loss of oedema)</th>
<th>Unchanged or deterioration</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regime without peanut milk</td>
<td>1 (25%)</td>
<td>3 (75%)</td>
<td>4</td>
</tr>
<tr>
<td>Regime using peanut milk</td>
<td>4 (66%)</td>
<td>2 (33%)</td>
<td>6</td>
</tr>
</tbody>
</table>

Field article

21
I’demonstration’ can be a powerful way to motivate of success. Very dramatic transformations are daunting for busy staff and also increases the chance motivated. Getting started can be rather time frame.

of what was agreed, and shows who accepted Developing an action plan serves as a useful reminder to feasible actions, co-operation and implementation.

to be involved include pharmacy and kitchen staff, as planning how to improve treatment, others who need changes in how malnourished children were fed, essential for recovery, they agreed to important with tenacity and resourcefulness. She describes capacity building in Malawi and Guinea where she overlooked. Dr Grabosch provides two examples of capacity building by transferring NGO knowledge

Public Health Nutrition Unit, London School Hygiene and Tropical Medicine

Local capacity building for treatment of severe malnutrition

Post script

Field article

International NGOs usually provide better treatment for children with severe malnutrition in their feeding centres than is provided by local hospitals. Unfortunately the opportunity for local capacity building by transferring NGO knowledge and skills to hospital staff in the host country is often overlooked. Dr Grabosch provides two examples of capacity building in each country; she set about the task of improving hospital treatment with tenacity and resourcefulness. She describes several key components for success:

a) involvement of hospital administrators - once the administrators were persuaded that feeding is essential for recovery, they agreed to important changes in how malnourished children were fed, including a change in policy to provide food. When planning how to improve treatment, others who need to be involved include pharmacy and kitchen staff, as well as doctors and nurses. Getting people together to identify and resolve problems is more likely to lead to feasible actions, co-operation and implementation. Developing an action plan serves as a useful reminder of what was agreed, and shows who accepted responsibility for the various actions and the expected timetables.

b) staff motivation - once staff saw that the new treatment was successful, they became more motivated. Getting started can be rather overwhelming when many changes are needed. Starting with just one or two children can be less daunting for busy staff and also increases the chance of success. Motivations are achieved when malnourished children are correctly managed, and working with malnourished children can be one of the most satisfying and rewarding jobs. Using just one or two children as an initial ‘demonstration’ can be a powerful way to motivate staff. Once they have seen children dramatically they will be taken more rapidly to treatment for all malnourished children in their care.

c) staff education - it is now widely acknowledged that poor knowledge of doctors and nurses about treatment of severe malnutrition leads to inadequate and even harmful treatment practices. Dr Grabosch found on-the-job training to be more effective than theoretical sessions. The Chinese proverb comes to mind: I hear; I see; I remember; I do and I understand. Training needs to be on-going, as new staff also need to be trained.

d) adaptability - it is unlikely that all resources will be available and innovative approaches such as described by Dr Grabosch for peanut milk, may be needed. Compromises may also be needed. Innovations and compromises require a sound knowledge of the principles of treatment and the physiological changes that occur in severe malnutrition, otherwise inappropriate decisions may be made.

potassium is essential and can be difficult to provide. Banana contains potassium but not in sufficient amounts to correct the deficit in severe malnutrition. Even if potassium chloride is not available, many adult wards have Slow K. Give malnourished children half a tablet/kg/day (crushed and preferably divided doses).

Recording: Dr Grabosch successfully introduced feed intake charts. Often nurses do not understand the purpose of the tasks they do, and then do the tasks badly or not at all. Knowing how the information can be used for decision-making can help nurses understand the purpose of the task. Feed charts are a good example as decisions about tube feeding and when to move to the catch-up phase are based on this information.

For sustainable improvements in hospital treatment, Dr Grabosch’s article gives helpful pointers and shows that treatment can succeed with few resources.

For readers interested in training nurses in hospitals with limited resources, Professor Ann Ashworth and colleagues have produced a training manual on CD Rom entitled ‘Improving the Management of Severe Malnutrition: A Guide for Trainers’.

For further information, please contact her via email: ann.hill@lshtm.ac.uk

For further information, contact: Dr. Eva Grabosch (M.Sc. CHCC), K. Hillebrandstr. 34, 97078 Würzburg, Germany


M. de Onis M, Conti B,Ansigo S. The worldwide magnitude of protein-energy malnutrition: an overview from the WHO Global Database on Child Growth


Peptide of Malawian, Annual report 1997, Paediatric Department of Lilongwe Central Hospital, 1998


In Malawi, despite the necessary adaptations of the WHO recommendations, it was possible to reduce the PEM associated mortality, amongst the 608 children treated at Lilongwe Central Hospital, from 30 % in 1995 to 21 % in 1997. Clinical and paramedical supervision of the nutrition rehabilitation seems to have been an important precondition for the success of the programmes in both countries. The remaining high mortality may have been partly due to the elevated HIV/AIDS prevalence in Malawi.

The results would have been undoubtedly better if WHO recommendations could have been followed. But, is it not better to have a sparrow in the hand than a dove on the roof? (German proverb)


For further information, contact: Dr. Eva Grabosch (M.Sc. CHCC), K. Hillebrandstr. 34, 97078 Würzburg, Germany


M. de Onis M, Conti B,Ansigo S. The worldwide magnitude of protein-energy malnutrition: an overview from the WHO Global Database on Child Growth


Peptide of Malawian, Annual report 1997, Paediatric Department of Lilongwe Central Hospital, 1998

Recommended management of severe malnutrition

Where possible, a dehydrated child with severe malnutrition should be rehydrated orally. Intravenous infusions easily cause overhydration and heart failure. Since malnourished children are typically deficient in potassium and have abnormally high levels of sodium, adapted oral rehydration solutions (ORS) are recommended. Magnesium, zinc and copper should also be given to correct deficiencies.

Resomal is a specially-adapted rehydration product available commercially. An acceptable solution can also be made by diluting 1 packet of standard WHO ORS solution in 2L of water (instead of 1L), and adding 50g sucrose (25gL/L) and 40ml (20ml/L) of mineral mix solution.

All malnourished children are at risk of developing hypoglycaemia. To prevent this, children should be fed at least 2-3 hourly, day and night.

Two formula diets are recommended in the management of severe malnutrition. F75 (75 kcal/100ml) is used during the initial phase of treatment while F100 (100kcal/100ml) is used during the rehabilitation phase after appetite has returned.

Both formulas are available commercially and are prepared by adding water. Alternatively these formulas can be prepared from basic ingredients (e.g. dried skimmed milk, sugar, cereal flour, oil, mineral mix and vitamin mix).

WHO recommended mixes of vitamins and minerals require accurate weighing of component ingredients. If only small amounts of feed are being prepared, a proprietary multivitamin supplement may be used. A combined mineral and vitamin mix for malnutrition is also available commercially.

Nearly all severely malnourished children are anaemic and should be supplemented with iron and folate acid. Iron should never be given in the first or initial phase of treatment, but in the rehabilitation phase. Iron should only be administered orally, never by injection.


Ethics of use of ready-to-use-therapeutic foods

Dear Editor,

I have been following the debate on the ethics surrounding the research on Community Therapeutic Care (CTC) and Ready to Use Therapeutic Foods (RUTFs), and was wondering whether the issue of ethics in the current use of RUTF’s in the field is also being discussed, as this also could have effects on the quality of the research and effectiveness of future CTC programmes.

I have just returned from a 5 week mission throughout three regions of Afghanistan, as part of the Quality Project implemented by Groupe URD. During my visit, I was struck to find a large number of NGOs distributing RUTFs to severely malnourished children in Supplementary Feeding Programmes (SFPs), sometimes with fortnightly distributions (mothers receiving 30 to 60 Plumpy’nut packets at a time), and most often with very little if any specific medical supervision of severely malnourished patients (sometimes including pregnant or lactating women, admitted according to MUAC).

Have the following issues been raised?

• Is it ethical to distribute a (very expensive) product for which the protocol is not yet fully tested and approved, and the efficiency of which is not proven outside the Therapeutic Feeding Centre (TFC)?

• How can we deal with the commercial interests lying behind the distribution of RUTFs? Is Afghanistan a potential new market for such foods, and what is the role of aid agencies in these strategies?

• How is this product being used within households (sold? shared?) and how may these practices hinder the future proper use of RUTFs in research programmes or actual CTC programmes, once the promo is developed? RUTF a food or a medical treatment, and if it is the latter, can it be freely distributed without careful monitoring and supervision?

I was concerned because many SFPs where RUTFs are distributed are implemented by agencies or field personnel who do not necessarily have nutritional training, are not familiar with the specificities of severely malnourished patients (sometimes including pregnant or lactating women, admitted according to MUAC).

Reducing the price of Plumpy’nut

Dear Editor,

The August edition of Field Exchange (Issue 16, p28) published an article by Anna Taylor (headquarters nutrition advisor for SC UK), summarising the evaluation of the Outpatient Therapeutic Programme (OTP) project by Save the Children UK in North Darfur, Sudan in 2001.

In her conclusion (point 8) Anna states that priority should be given to the development of new products with a view to reducing prices, since Nutriset Plumpy’nut is currently prohibitively expensive for routine use. We would like to comment on this pricing issue and update your readers on our recent venues aimed at improving sustainability of ready-to-use therapeutic food.

We are aware of the fact that imported products are expensive. This is partly due to the use of milk-based ingredients in this product and also the need to use a sophisticated packaging technology to ensure the long storage life required for long distance transports. Regular production, however, has enabled us to decrease Plumpy’nut prices over the past few months.

To make the home based treatment with Plumpy’nut more sustainable, Nutriset is actively exploring the local production of this food. This option should be more adapted to the post emergency phase of interventions. A number of tests are being carried out, and a local production has already started in Malawi. In addition, we are currently involved in a project to set up a local production of Plumpy’nut in Dakar, Senegal.

The Dakar Project has involved working partnerships between the Human Nutrition team at the Laboratory of animal physiology (Institute for Food Technology) and Co Aid (Corporation of African Integrative Development). Preliminary results (due for publication) using Plumpy’nut in malnourished children demonstrate weight gains on Plumpy’nut that are higher than those obtained with the reference product, F100.

As part of the project, consideration has been given to the development of this kind of project in other geographical areas. Indeed there is potential for NGOs or other organisations to locally produce Plumpy’nut. To this end, relevant information and experiences will be made available for use by NGOs and other organisations identified for local production in the future.

Yours sincerely

Michelle Lescanne, NUTRISET (Institute for Food Technology) and Co Aid (Corporation of African Integrative Development).
Self-Targeting in Ambon, Indonesia

“To be or not to be community minded”

By Carole Lambert

Carole Lambert has been a Food Security Officer with Action Contre la Faim for the past four years, actively involved in programmes in the Ivory Coast, Burundi, Serbia and Indonesia. She is also in charge of capitalising on ACF Food Security experiences and, for the past eight months, has been writing methodological modules based at ACF HQ in Paris. Her training background is in Food Science and Nutrition.

Carole would like to acknowledge the significant contribution of the ACF Food Security team in Ambon and all the people there who collaborated positively in the process.

This article shares some of ACF’s recent experiences in food distribution in Indonesia which, in particular, raises some interesting issues on self-targeting strategies in conflict affected areas.

In January 1999, the city of Ambon, situated in the Maluku province of Indonesia, became the scene of factional fighting between gangs. This soon spread to the whole island, escalating into a conflict between Muslem and Christian communities. During the following months, the conflict extended to the neighbouring islands, and showed no signs of abating until after April 1999. This proved short-lived and by July 1999, violence had again spiralled throughout Ambon. Consequently, by the end of the year, approximately 90,000 people had been displaced and the conflict had extended to the neighbouring North Maluku Province. By the beginning of 2000, virtually the whole of the two Maluku provinces were affected and the death toll was estimated at 4,000 people.

Although the violence receded during the second half of 2000, the problems of population displacement and poor social relations between hostile groups showed little improvement. By early 2001, it was estimated that between 400,000 and 500,000 Maluku people were displaced (out of an initial population of 2 million) and that the whole of the Maluku society was almost completely segregated along religious lines.

ACF Response

In response to the initial population displacement, Action Contre la Faim (ACF) began distributing food and essential hygiene products to the displaced families in May 1999. By the middle of 2000, nearly 200,000 of the internally displaced population (IDP) were benefiting from ACF’s assistance (some since the beginning of the programme) in various islands of the area.

In the urban and peri-urban parts of Ambon Island, there were approximately 20,000 families (corresponding to 80,000 beneficiaries), with an estimated 60% living in the Christian zone and the remainder housed in the Moslem zone. According to the distribution system that had already been established, these families were enrolled on about 120 lists in the Christian zone and 80 in the Moslem zone. The number of beneficiaries enrolled on each list varied from tens to several hundreds of families.

Self-targeting rationale

Several logistical factors made the monitoring of food security difficult. Distributions had to be made by sea from an archipelago. Also, due to the difficulties of crossing one community area to distribute in another rival one, it was often necessary to duplicate bases and activities. This extended human resource capacity. In addition, security was a constant consideration and concern.

In spite of the difficulty in monitoring food security, it had seemed fairly clear to ACF for several months that the needs had to be re-evaluated and that a strategy of distribution reduction should be defined in parallel with a re-orientation of programmes. This process was likely to be complex due to the diverse circumstances of the displaced population. Families moved at different periods, residing in both rural and urban districts. Certain families were taken in by host families, whilst others installed themselves in abandoned houses, built temporary huts or set up camps in different types of buildings, etc.

In the urban zones and the villages a ‘blanket’ decision on targeting, e.g. stopping distributions or changing over to support with seeds and tools, did not seem appropriate (there was no access to land or sea and there remained a general requirements for food). Therefore, ACF decided that targeting should take place at the household level.

Targeting sessions

The over-riding aim of the process was to facilitate the communities in identifying the vulnerable families whom they considered must remain beneficiaries of aid.

The principles of the targeting methodology were:

- target according to the households’ vulnerability level and their capacity to cope with the crisis
- community participation
- internal and external transparency and communication.

There were a number of unknown factors as ACF embarked on this process, in particular, what were the factors that determine the households’ level of food security and what proportion of the beneficiaries were food insecure/dependent on external assistance.

The first phase of targeting involved gathering and exchanging information with principal local authorities, and through general meetings with IDPs’ co-ordinators. Based on the existing distribution system, targeting sessions were implemented for each ‘distribution list’ community. At this stage, approx 200 sessions or meetings were anticipated, divided between the Christian and Moslem teams.

Step 1: Informing the IDP co-ordinators and identification of the IDPs ‘key committee’

Meetings were organised with this ‘key committee’ (key representatives of those on the distribution list) in order to start the process of implementing the targeting session itself. The main task of the key committee was the constitution of the focus group which had to be representative in terms of gender balance, places of origin of IDPs and age. If other characteristics were deemed to be important by the key committee in terms of ensuring representation,
these would also be considered in choosing the focus group. The rule of thumb was that at least 10% of the beneficiary families should be in the focus group up to a maximum of 50 persons (to keep it manageable).

The key committee also started working on the targeting criteria using an indicative list proposed by ACF. Based on this list, the key committee was required to identify the criteria they believed were most appropriate but, at the same time, were instructed not to interfere in the subsequent discussion on targeting criteria within the focus group.

Step 2: Targeting with the focus group

The focus group was charged with the responsibility of defining the food security classification criteria that determined who continued to receive support, and then locating each household within their community within this classification system.

The only directive given to the focus group was that three categories should be defined, namely:

- **Category 1**: Vulnerable households, still in need of assistance. These households will continue to receive regular monthly hygiene and food rations.
- **Category 2**: Intermediary households, who would still need assistance in the short term (i.e. almost food secure). These households would receive two last ration distributions.
- **Category 3**: Food secure households. These households would receive one last ration distribution.

A report would be written after each session and it was the responsibility of the focus group, key committee and ACF teams to ensure that the information was passed onto the rest of the beneficiaries.

**Modifications to method**

Whilst adopting a very open and participatory approach initially, the exercise became progressively more directive, in response to the need to improve efficiency and in order to adapt to identified circumstances.

The entire process posed a number of challenges. These included lengths of time it took for implementation, the lack of standardisation of targeting criteria and varying definitions of vulnerability levels between communities that could contribute to misunderstandings. The ensuing need for organisational efficiency demanded excellent internal coordination between ACF teams so that decisions taken were implemented correctly during distributions.

In addition, the concept behind the focus groups was not always well accepted or executed among communities, partly because nobody wanted to take responsibility for decisions which might have led to the exclusion of certain households. Also in some cases, focus group members did not know about the circumstances of other households to allow an informed decision to be made.

In order to try to solve some of these difficulties a number of modifications were introduced.

- The conceptual ‘non-acceptance’ or failed implementation of the exclusion process by the focus group led to invitations being extended to representatives of each household registered on the existing lists, to targeting sessions. This was feasible only with the capacity of the teams to animate and manage large groups of people.

- ACF proposed a list of four classification criteria to the focus group (see table 1). These criteria were chosen on the basis of previous targeting session experiences, where it was observed that adopted criteria were quite similar between ‘distribution list’ communities. Nevertheless, participants were still encouraged to discuss these criteria in order to adapt them to their specific situation as required.

**Self-targeting: ‘right’ versus ‘need’**

On implementing the targeting programme over several weeks, ACF teams were able to see that the process worked fairly well on the Moslem side, whereas the results were less satisfactory on the Christian side. The focus groups identified 60% of the population as beneficiary families (in the vulnerable category) on the Moslem side, whereas this figure was as high as 90% in the Christian enclaves.

Within the two communities, the participants acknowledged the existence of different levels of needs between families (the principle of targeting on the basis of socio-economic status had never been questioned). However, and especially within the Christian community, when the time came to classify households, the participants had a tendency to incorporate and prioritise the ‘conflict status’ of a household. The implication was that all conflict affected households had a right to assistance irrespective of their actual access to food and consequent need for support. In a way this was understandable as until this point, assistance criteria of most organisations (including ACF) were based on whether populations were displaced due to conflict. However, while a judicious means of targeting in the early acute stages of an emergency, these criteria were clearly no longer valid after a few months. Indeed when introducing the targeted programme, some of the households had been displaced for up to two years.

Given the pervasive sense of ‘having a right to something’, most of the Christian participants frequently came to the conclusion that, if reduction was really necessary, it would be more equitable to reduce assistance in the same proportion for all the beneficiaries. They felt that allocating resources to just a proportion of families might trigger jealousy within a community. Indeed certain participants stated that they would prefer and more readily accept unilaterally imposed targeting decisions by ACF rather than ‘this community process’, which ultimately created more internal tensions. In fact this is what finally happened with the Christian lists, where all the beneficiaries who had received food assistance for more than a year were struck off the lists.

**Attesting an explanation**

Since the teams were trained and briefed in the same way, at the same time and, as often as possible, together, we can not consider that they could have different approaches or understanding that could explain those differences. Nor was it possible to attribute the difference to varying levels of food vulnerability between the two communities (as shown later on by a Post Distribution Monitoring, which also attempted to establish levels of food dependency). More ‘sociological’ explanations of differences between the two communities seem apposite. For example, ‘psychological’ vulnerability, the different notions of the community spirit and social-economic differences due to histories of colonisation and transmigration.

**Lessons learned**

In many respects, ACF’s experience of this household level targeting programme in Ambon is specific to the unique context of the island. However there were many technical and strategic aspects that may be applicable or have relevance in other situations.

Fundamentally, this experience has shown that the relative success of community-based targeting greatly depends on the sociological context. It therefore seems difficult to generalise about optimal targeting methods. However, certain general principles can be identified and irrespective of what method is adopted, good communication and transparency remain essential for success.

A lot of misunderstanding can be avoided if beneficiaries know who is assisting them, why, how and the length of time assistance will last. At the same time humanitarian agencies are, to some degree, dependent upon the community’s honesty, even though in situations of life-threatening crisis this may not always be easy to secure.

ACF’s experience of this programme also highlights the crucial importance of monitoring the food security situation of beneficiaries over time. However, certain questions still remain. What monitoring should be carried out after targeting has been implemented? Food security is the result of a combination of social-economic factors. Yet these factors change with time. Must a ‘safety net’ be maintained for families who might be identified as vulnerable later on? How can local partnerships be developed so that necessary monitoring and the potential necessary actions/responses can be implemented when ACF leaves?

**To be or not to be community minded?**

There is no single solution that works on every level. Thus it is particularly important to remain clear and straightforward and not to lose sight of the main aims of a targeted programme. These are, to optimise the distribution of available resources, to reduce the negative impact of long-term distributions and to reach the most vulnerable within the population.

Ultimately, each context requires a particular approach, we must be able to adapt!

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For further information, contact Sylvie Montembaul, ACF Food Security Service at email: scondesac@acf.imaginet.fr or Carole Lambert at email: kodoseac@act.imaginet.fr

Field Exchange would like to invite readers with experience of community based targeting to comment on this article and/or to contribute their own experiences of this type of programming. Ed
John O’Shea, in assisting the world’s poorest people.

“We are not there only to help provide basic needs in terms of food water shelter health care etc. more importantly we are there to show the poor we care”. John describes the organisations ethos as centring on ‘love of the poor, when we love, we care and when we care we do the right thing”. John interviewed John for Field Exchange in the same spot as he had interviewed me fourteen years ago for a volunteer position in Sudan. The venue was the lounge in the Royal Marine hotel in Dun Laoghaire (South Dublin). John uses the hotel for meeting people, a hang over from the days when there was no room for this in the GOAL office and indeed from before that to the days when there was no GOAL office. It’s also convenient, as he can’t be disturbed or more likely distracted by the bustling business of the energetic humanitarian organisation.

John himself over the years has got good press and bad press but always press, because he always has an opinion and is not afraid to give it regardless of how controversial it may be. John hates injustice and secrets from the mountain tops when he sees it. He feels the same indignation and outrage today when he sees a child die of hunger or not having access to basic health care as he did 25 years ago. He is not afraid of being critical and taking on governments if that’s what he thinks needs to be done. John is no convenient, as he can’t be disturbed or more likely distracted by the bustling business of the energetic humanitarian organisation.

John O’Shea’s approach to humanitarian work influences John’s approach to humanitarian work.

The next country GOAL became operational in was Cambodia, prompted by John Pulgers report on the atrocities caused by Pol Pot. GOAL sent doctors and nurses to work in the Cambodian Refugee camps in Thailand. GOAL continued to send staff overseas from this point.

John is humble about his organisations’ ability to make significant changes however those familiar with GOAL’s current projects in 12 African 4 Asian 2 Central American and 3 east European countries can see the organisations’ concrete achievements. GOAL is involved in emergency health and nutrition work in Afghanistan, Malawi, Sudan, DRC, Angola and Ethiopia. Though GOAL responds to problems of the poor rather than specialising in particular kinds of interventions it has, over recent years built capacity in food security and the agricultural sector. GOAL’s largest programme is in Afghanistan with an overall budget of almost $10 million. School rehabilitation and sports projects are co-ordinated in Kabul, while in Mazar-I-Shafir in northern Afghanistan GOAL is the lead agency for the WFP’s food distribution programmes. In Samangan and Jawzjan provinces GOAL implements cash for work, food for asset creation and agricultural rehabilitation programmes. In Malawi GOAL is involved in general ration distributions, supplementary feeding and provides nutritional training for MoPH professionals. GOAL is currently registering in Zimbabwe with a view to becoming operational. In DRC GOAL is involved in food security and infrastructure rehabilitation programmes as well as emergency primary health care provision. In Angola GOAL is responding to the emergency following the signing of the peace accord. In Ethiopia, supplementary feeding and emergency health programmes have expanded in the Afar and Oromia regions in the past three months.

Since its foundation GOAL has spent over €175million on its humanitarian programmes deploying over 900 GOAL volunteers. From the beginning of 1997 it has received a total of €16.6 million from the Irish government representing a total of 15% income in corresponding period. The volunteer ethos is important to GOAL. “We have been very lucky with the hundreds of highly professional volunteers who have given up so much to assist the poor in other countries”. When asked about the drive towards professionalisation and minimum standards amongst humanitarian agencies

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**25 years of GOAL**

Fiona O’Reilly interviews John O’Shea

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<thead>
<tr>
<th>Name</th>
<th>GOAL</th>
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<tbody>
<tr>
<td>Address</td>
<td>PO Box 19, Dun Laoghaire, Co Dublin, Ireland</td>
</tr>
<tr>
<td>Telephone</td>
<td>+353 1 2809779</td>
</tr>
<tr>
<td>Fax</td>
<td>+353 1 2809215</td>
</tr>
<tr>
<td>Internet Site</td>
<td><a href="http://www.goal.ie">www.goal.ie</a></td>
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<tr>
<td>Year Formed</td>
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</tr>
<tr>
<td>Chief Executive</td>
<td>John O’Shea</td>
</tr>
<tr>
<td>Overseas staff</td>
<td>116 expatriate, 2,700 local</td>
</tr>
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<td>HQ staff</td>
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<td>Annual budget</td>
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Aid responses to Afghanistan: lessons from previous evaluations

Summary of report

A review of over 50 formal evaluation reports was conducted by a Development Assistance Committee (DAC) Working party on Aid Evaluation (Organisation for Economic Co-operation and Development), whose findings were submitted by their chair to a DAC senior level meeting on 12-13 December 2001. The purpose of the review was to distil key lessons from previous evaluations, which may have direct or potential relevance to the ongoing situation in Afghanistan. The reviews and lessons learnt were compiled with the help of ALNAP and an expert group. It was hoped that DAC members and other key international actors would consider how to ensure that the lessons from previous operations were built into the planning and co-ordination mechanisms for aid to Afghanistan and how to institute the necessary actions and safeguards to facilitate this. The following key findings of the review may be of particular interest to readers of Field Exchange.

1. The need to develop a coherent policy framework that recognises that humanitarian aid requires its own ‘space’

The central findings of the Joint Evaluation of Emergency Assistance to Rwanda was that aid cannot be a substitute for political action and that in the absence of a just and sustainable political settlement, the potential achievements of aid will be modest. In Afghanistan the Strategic Framework process, launched in 1997 to achieve policy coherence, had some limited success but failed in its policy coherence aims. The full potential of the framework as an aid coordination mechanism was not realised due to the differing conceptions of what politics can do and what aid can do.

The review stressed that the DAC members should agree on a single conception of the role of aid, and design their structures and programmes in Afghanistan accordingly.

2. Co-ordination requires clarity of structure, leadership and a willingness not to ‘fly national flags’

Evaluations reveal a tendency for large-scale emergency responses to generate multiple, overlapping co-ordination mechanisms where lines of authority and therefore accountabilities are unclear. In addition, a recurring pattern for many organisations and agencies is to disregard co-ordination mechanisms when it does not suit their perceived interests. Donor organisations should collectively take the lead in developing criteria and benchmarks for assessing the performance of co-ordination mechanisms and the behaviour of those being co-ordinated.

3. The primary role of external military forces should be the provision of security and protection rather than aid delivery

External military and peacekeeping forces have assumed varying degrees of humanitarian aid delivery roles in many of the large-scale emergency operations since 1990. Where their role has been evaluated, the evidence is that they are several times more expensive per unit of aid delivered than humanitarian or commercial suppliers. In contexts where fighting has just ended and where the capacity of those channels is not sufficient, the military may play a useful role in the immediate restoration of vital infrastructure. Where military forces undertake security roles and particularly in those situations where they are belligerents in the conflict, a clear separation has to be maintained between such forces and any humanitarian or other aid delivery. Confusion of roles and of local perceptions of humanitarian and aid agencies can endanger the activities of agency personnel.

4. The relief-rehabilitation-development transition requires delegation of authority, flexibility and strengthened monitoring

Evaluation of relief-rehabilitation-development transitions reveals lack of continuity between initial relief provision and the delivery of rehabilitation and longer-term development assistance. Factors implicated in the difficulties are high turnover of agency personnel and rapid falls in (what may have been initially generous) levels of assistance in the face of the very real difficulties of working in weak institutional environments, often with diversion of attention and resources to subsequent crises elsewhere. Current assessments of best practice point to the need for a number of prevailing circumstances, which require a vision of end goals shared by the donor community and local actors. In addition clear schedules and assigned responsibilities are essential components of hand-over from emergency personnel and agencies to their successors undertaking rehabilitation and development programmes.

5. Strengthen, use and support local institutional capacity

Unmanaged influxes of aid agencies are an increasing feature of high profile international political-military-aid interventions. For example, in Rwanda approximately 200 organisations were present, while the figure reached 300 in Kosovo. Such influxes drive up office and housing rents, draw good local staff away from their normal jobs, spur bidding competition among organisations and create the perception that the agencies and their personnel are benefiting more than the local population. The most efficient way to contain the problems of expatriate dominance and disruption is to prioritise the identification and engagement of local and national emergency and rehabilitation actors, even where national and governmental structures remain weak or not fully legitimate.

6. Control the ‘war economy’ and confront the risk of entrenched chronic violence

Evaluations and other studies on Sierra Leone, Liberia, Angola and Cambodia have shown that semi-legal and illegal activities can be an important motivation for factional conflict and for sustaining certain faction leaders in power. In the Afghanistan context, narcotics production plays a very significant role and it will be necessary to understand how such activities may be influencing political negotiations and ongoing instability, and work to reduce the incentive for poppy production. Early efforts to rehabilitate irrigation systems and re-establish production of food and other legal crops will be required together with efforts to regulate and reduce the role of illicit trade. If drastic narcotic substitution programmes are implemented, safety nets will be required for those who may be rendered destitute.

7. Accountability and learning mechanisms of the aid system require strengthening

Weaknesses in the accountability structures of aid organisations have been recurrent findings of many evaluations. The Joint Evaluation of Emergency Assistance to Rwanda recommended the establishment of an independent monitoring entity and ombudsman function. While this recommendation has not been acted upon, it did lead to the creation of the Humanitarian Accountability Project (HAP) which is planning to field test methods for ensuring the accountability of all aid agencies in Afghanistan over the next few months.

Scurvy outbreak in Afghanistan:
An investigation by Action Contre la Faim (ACF) and WHO

By Philipe Leborgne, Caroline Wilkinson, Sylvie Montembaut, and Mija Tesse Ververs

Dr Philippe Leborgne has been Head of the ACF Medical Department since 1994. Before this he worked with a French NGO in primary health care in Equatorial Guinea and in Rwanda with MSF.

Caroline Wilkinson has been a nutrition advisor in the Paris headquarters of ACF since 2000. Before this she spent five years working as an ACF field nutritionist in Africa, Kosovo and Central Asia.

Sylvie Montembaut is an agronomist and has been ACF Head of Food Security Department since 2001. Before this, she was a field worker and consultant for different humanitarian agencies in China, Sri Lanka, Bosnia, Armenia, Georgia, Burundi & Chechnya.

Mija Tesse Ververs is the ACF Technical Director.

The support of Dr. Sylvie Goosens (ACF Taywara) and WHO, especially Dr Yon Fleerackers (WHO Kabul), is acknowledged and appreciated.

Taywara district is located in the south of Ghor province, Western Afghanistan. The area is mountainous and access between the main town, Taywara Centre, and the villages is very limited. The population of Taywara district numbers approximately 79,000 people. The nearest hospital to Taywara Centre is located in Chaghcharan (provincial capital), a one day car journey from the town during the summer, and an often inaccessible route during the winter. Throughout the remainder of the district, very few dispensaries are functional.

In early March 2002, whilst establishing a nutrition programme in the area, an ACF field team came across twenty deaths and forty seven suspected cases of scurvy in four villages.

The main symptoms described were:
- pain in the joints leading to inability to walk
- gingivitis, with bleeding gums and loss of teeth
- oedema of the lower limbs, and of the knees
- haematoma and ecchimosis (black spot) on the legs.

Subsequently, on the 6th March 2002, these suspected scurry cases were reported by ACF to the WHO Sub-Office in Herat. In response, an investigation team was sent on 12th March from Herat (including a WHO epidemiologist and Ministry of Health staff) to join the ACF doctors in Taywara Centre.

Outbreak investigation

The case definition of scurvy used by the investigating team was painful legs and/or joints and hemorrhagic gingivitis (bleeding gums) and/or ecchimosis on the legs. The geographical location of the investigation was confined to the Taywara district and the time frame restricted to after the beginning of Eid Ramazan (16 December 2001).

Confirmation of 24 cases was carried out in this village. Regarding the twelve cases not identified as scurvy, all the 242 villages in Taywara district through the accessibility reasons, case identification could only be carried out in this village. Regarding the twelve confirmed cases, 83% had first developed symptoms in January and February 2002. The median age for this caseload was 30 years, ranging from 7 to 50 years.

In addition six deaths (that were locally attributed to scurvy) had occurred between January and February 2002. The mean time between the onset of symptoms and death was 16 days, ranging from 6 to 31 days. Death occurred in all those with the condition who were over fifty years of age.

Among the eighteen suspected cases, eight (44%) were male and ten (56%) were female. The median age was 35 years.

During field trips by the teams between 5 and 14 March 2002, four children aged between 3 and 5 years old had been seen in two villages close to Taywara Centre, who were suffering from painful joints which prevented them from standing up or walking.

The identified priorities of the investigation were to:
- Confirm the outbreak.
- Evaluate the district scurvy case fatality rate during the last 3 months.
- Evaluate the district scurvy attack rate during the last 3 months through village interviews by community health workers.
- Evaluate the district scurvy prevalence (from the number of scurvy cases diagnosed at the time of the visits by community health workers).
- Treat confirmed cases.
- Make recommendations adapted to the local context.

Between 14th to 20th March, vitamin C tablets provided by UNICEF and WHO were distributed to all of the 242 villages in Taywara district through the trained community health workers. Until that time, vitamin C had only been available in pharmacies in Taywara Centre.

To facilitate this operation, twenty-five village health workers received training by the investigation team on the symptoms and signs of scurvy, treatment protocols, and scurvy morbidity and mortality data collection.

Confirmed cases of scurvy

Eighteen suspected cases were investigated in Zardbid village, of which twelve were clinically diagnosed with scurvy on the day of the visit. For accessibility reasons, case identification could only be carried out in this village. Regarding the twelve confirmed cases, 83% had first developed symptoms in January and February 2002. The median age for this caseload was 30 years, ranging from 7 to 50 years.

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A guide to scurvy

Definition, symptoms and signs
Severe vitamin C deficiency causes scurvy, a disease that manifests itself 2-3 months after consuming a diet lacking in vitamin C. The most clearly defined function of vitamin C is to maintain collagen formation.

Frank scurvy in adults is preceded by a period of latent scurvy, the symptoms of which include lassitude, weakness and irritability, vague dull aching pains in the muscles or joints of the legs and feet, and weight loss. Scurvy in adults eventually results in internal haemorrhages, swollen joints, swollen bleeding gums and peripheral oedema, with impaired work capacity. In infants, scurvy leads to irritability, tenderness of the legs and pseudo paralysis, usually involving the lower extremities. Scurvy in any age group causes impaired resistance to infections and internal haemorrhages which can be fatal.

The main criteria for diagnosing scurvy are:
• History of dietary inadequacy of vitamin C
• Clinical manifestation of scurbitic state
• Biochemical indices, i.e. low serum, white blood cell and whole blood vitamin C levels and a low urinary excretion rate.

Sources of vitamin C
Vitamin C is mainly found in fresh fruit and vegetables. Freshly germinating pulses and beans are a significant source of vitamin C but levels rapidly deplete on storage. Populations wholly dependant on food aid (standard ration of cereals, beans and oil) or drought and famine affected populations (where fresh fruit and vegetables are scarce) are particularly vulnerable to scurvy. Breastmilk is a good source of vitamin C and covers an infant’s needs.

Prevention and management
Even a single case of scurvy seen in a population reflects a public health problem (see table).

Criteria for severity of public health problem of vitamin C deficiency

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The principal way of addressing vitamin C deficiency is by improving the diet. In emergencies, it is recommended that food distribution to affected populations should provide the 30mg WHO/FAO recommended daily allowance (RDA) of vitamin C. This amount is found in half an orange, a medium tomato or a small helping of leafy vegetables. Securing an adequate diet for large emergency affected populations or isolated communities can be a problem, especially in the initial phase of an emergency operation. Distribution of fortified foods is a recognised way of meeting the immediate needs and maintaining vitamin C status in such populations.

Treatment
Where cases of scurvy have been identified (or in a high risk population where food-based options are not immediately available), daily supplementation with vitamin C, or at least weekly, is recommended.

Adapted from: Scurvy and its prevention and control in major emergencies. WHO/NHD/99.11
People in aid

Top, left to right: Mr. Peter Goossens (Deputy Country Director, World Food Program Afghanistan) and Ms. Christine van Nieuwenhuyse (Senior Policy Analyst, World Food Programme, Rome). Mr. Aslak Brun (Assistant Director-General, Royal Norwegian Ministry of Foreign Affairs, UN Section), Ms. Rannveig Fjaer Bremer (M.D./Pediatrician, HQ Defense Command Norway Medical Branch, Office for Disaster Preparedness), Ms. Wenche Barth Eide (Associate Professor, IPRFD/Institute for Nutrition Research at University of Oslo) and Mr. Erling Kvarnsvik (Relief Coordinator/Nutritionist, Norwegian Red Cross).

Middle, left to right: Elham Monsef, Annie Lloyd and Marcin O’Reilly; participants of a Sphere Training workshop held in APRO, Dublin. Clockwise around the table from bottom left: Kifu Lemma, Benoit Raymakers, Wondwessin Tsegani, Helen Young, Aregawi Hagos, Malaku Ayalew, Azakilt G. Yoannes and Landuber Araya.

Bottom, left to right: Wondwessin Delelegne, Yosef G. Hiwot, Kinoss Tefera and Tedros Agninh. Eric Ouannes (MSF).
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 quarterly newsletter, 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 Newsletter 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.

The Team
Fiona O’Reilly (Field Exchange production editor) and Jeremy Shoham (Field Exchange technical editor) are both ENN directors. Jeremy and Fiona established the ENN in the Department of Community Health in Trinity College, Dublin in 1996. Earlier this year the ENN incorporated as a not-for-profit company limited by guarantee.

Kornelius Elstner is responsible for Field Exchange design and layout. He is also the ENN I.T. specialist and works part time at the ENN while undertaking a degree in computer science.

Marie McGrath is a qualified paediatric dietician/nutritionist. She has an abundance of experience in emergencies, working previously with Melin and carrying out research with SC UK. Marie is the new addition to the Field Exchange editorial team.