Relief and Rehabilitation Network

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EuronAid

Good Practice Review 2

Emergency Supplementary Feeding Programmes

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Emergency Supplementary Feeding Programmes

1. Objectives and Intended Audience

The objective of this review is to provide a short, accessible overview of what may be considered `good practice' in designing and implementing emergency supplementary feeding programmes (SFPs). It is aimed primarily at NGO, UN, and donor staff who are *not* specialists in nutrition and emergency feeding but who may, in the context of some future emergency, be involved in decisions about feeding programmes. The review may also prove useful to those nutritionists who do not have a wide experience of different emergency situations and the complex array of issues which must frequently be considered in determining whether to implement an emergency SFP and how such a programme might be designed.

The review is not intended to be a technical manual. Such manuals exist and are easily obtainable (Annex 1). It will, however, attempt to complement existing manuals/guidelines by examining a variety of different emergency scenarios with a view to defining best practice in these situations. Guidelines must by definition address the general rather than the specific and must, above all, be succinct. Inevitably this means that many situation- and location-specific factors cannot be considered. This is not to say that agency emergency supplementary feeding experience, policy and practice have not evolved to reflect changing emergency scenarios over the past 10-15 years, but rather that there are no currently available reviews which **adequately** reflect the complexity of situations within which decisions must be taken and which can be used as a complement to existing guidelines, to inform decisions which lead to good practice in different situations. Although there have been some slight modifications to reflect a variety of current emergency scenarios, existing guidelines are primarily focused upon refugee-type situations. This review will therefore consider `good practice' in relation to a broader variety of scenarios reflecting the range of situations now commonly faced by relief agency personnel and which are not considered to be adequately dealt with by existing guidelines. Seven scenarios are considered in Chapter 6. These are divided into the broad categories of camp, non-camp and urban populations. For

each broad category, the potential impact of conflict on the design of, and ability to, implement emergency SFPs is considered.

Refugee Camps: early stages of displacement
Refugee Camps: stabilised populations
Camps for internally displaced populations

Non-camp: rural resident populations
Non-camp: displaced populations

Urban: resident populations
Urban: displaced populations

Additional information is provided in four annexes. Annex 1 indicates the principal guidelines available and key texts for those readers wishing to explore the literature on emergency SFPs. Annexes 2, 3 and 4 provide checklists for use in implementing emergency SFPs.

This review attempts to provide an accessible overview which helps to contextualise much of the information contained in existing technical guidelines. It is hoped that it will increase readers' awareness that there are few hard-and- fast rules about how to design and implement emergency SFPs. Perhaps the most useful rule is that a full prior appraisal should be made of the location-specific and situation-specific factors.

A major difficulty in preparing a review such as this one is identifying what actually constitutes `good practice' in the field of emergency supplementary feeding. Factors contributing to this difficulty include the following:

- many aspects of the programmes are highly controversial, with opinions shaped as much by professional background and organisational philosophy as by empirical research findings

- some aspects of emergency SFP practice are based upon assumptions which have not been properly tested, yet continue to hold sway

- there is a need for research in a number of important areas to make SFPs more effective, yet emergency situations rarely lend themselves to the conduct of scientific research

- political and institutional factors may override technical considerations and lead to programme designs which are known to be sub-optimal

- few agencies adequately document their experiences in implementing emergency SFPs and even fewer actually publish such information thereby constraining informed debate

- location- and population-specific factors make the interaction between each beneficiary population and the emergency SFP highly variable.

2. Emergency Supplementary Feeding Programmes: Principles and Context

Introduction

This chapter aims to describe the basic principles and design elements of emergency supplementary feeding programmes and to discuss the role and context of such programmes within overall response strategies to emergencies. Certain fundamental nutritional principles and practices therefore need to be described, although for more technical details readers will be directed to other sources. The chapter also includes a brief historical overview of SFPs.

2.1 What are the primary objectives of emergency SFPs?

Two categories of emergency SFPs can be distinguished, namely curative and preventive programmes. Curative programmes have as their primary objective the promotion of weight gain amongst mildly and moderately malnourished individuals (generally children), thereby reducing the risk of related illness and death. Preventive programmes aim to pre-empt a deterioration of nutritional status in those individuals (generally believed to be children) most at risk of malnutrition resulting from a threat such as reduced access to food or an altered disease environment. Both types of programmes are designed to provide nourishing food in addition to the normal diet. Thus, in order to be effective the extra rations must be additional to, and not a substitute for, the normal diet.

2.2 Recent experiences of SFPs

SFPs have been a major component of nutrition interventions in developing countries for many years. Traditionally, these programmes are linked to national health programmes and are incorporated into mother and child health programmes (MCH) which form part of the primary health-care infrastructure in developing countries.

MCH programmes offer a variety of health and nutritional services including ante- and post-natal care, immunisations, nutrition and health education, and growth monitoring of young children (normally those under five years of age). In many countries, the growth monitoring system is linked to supplementary feeding for children who are not growing adequately or who are already malnourished.

A definitive review of non-emergency SFPs in developing countries in the 1970s[1] concluded that these programmes were frequently unable to demonstrate any significant impact upon the growth of participating children, and called into question the cost-effectiveness of these interventions. Several explanations were offered for the apparently limited impact of these programmes, namely that:

- supplements would be shared with other family members or the meal would be used as a substitute for what the child would otherwise receive at home

- a large part of the supplement has an impact upon children's physical activity and health status, e.g. immunity, which can not be easily measured

- the size of the supplement was too small in relation to household food shortages, or the medical inputs to the programme were inadequate.

A number of subsequent reviews also called into question the efficacy of such programmes in both development and emergency situations[2]. Arguments against the use of these types of programme increased during the 1980s. Typically it was argued that they were divisive within households and removed the responsibility for feeding to an outside agency. It was also argued that they were `patronising' in that the intervening agency was making the assumption that intra-household targeting of food was incorrect, e.g. the most needy were not given priority. Implementing agencies were effectively accused of saying `we know best when it

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[1] Beaton G (1993) *Nutritional Issues in Food Aid*. Papers from the ACC/SCN 19th Session, April 1993, pp. 37-55. Ghassemi H (1992) `Supplementary Feeding Programmes in Developing Countries: Lessons of the 1980s'. Part 2, Discussion and References, Asia Pacific Journal of Clinical Nutrition (1992), Vol. 1, pp. 195-206.

[2] Godfrey N (1986) *Supplementary Feeding Programmes in Refugee Populations*. Evaluation and Planning Centre for Health Care, LSHTM.

comes to targeting scarce food resources'. These criticisms were translated into policy by at least one agency (ICRC) whose subsequent strategy in its emergency operations was to provide a very large general ration which would automatically provide sufficient food for the whole household, thus making it unnecessary to provide supplementary feeding for selected members within the household[3].

Despite these debates, the vast majority of relief agencies continued to implement emergency SFPs. During the 1970s and early 1980s emergency programmes were predominantly in support of refugees in camp situations, and the evolving guidelines on emergency SFPs were generally based upon these experiences. Generally speaking these programmes often achieved their short-term objectives in that a high proportion (usually in excess of 80%) of previously malnourished beneficiaries were discharged on attaining satisfactory weights.

The numbers of refugees and emergency-affected populations increased, particularly after 1985. Simultaneously the number of agencies involved in relief operations also increased, a large proportion of them being international and indigenous NGOs, which routinely implemented SFPs in their emergency operations. An increasing number of these programmes were targeted on non-camp populations, either internally displaced or resident populations afflicted by conflict and food insecurity.

As will be discussed in Chapter 3, the present review takes the view that, whilst relief programmes should be sufficiently timely and designed to minimise the need for emergency supplementary feeding, a combination of political, institutional and resource factors will limit the effectiveness of the overall response, and consequently emergency SFPs will continue to form an important part of many emergency programmes. Not only are such programmes required in many emergency situations but, if implemented well, they can also have a significant impact in reducing mortality generally.

[3] It should be noted, however, that the ICRC is in an unusual position compared with most other relief agencies, in that it is able to obtain sufficient food from donors to implement emergency general feeding programmes and also has the institutional capacity to manage such programmes.

2.3 Some basic nutritional principles for non-nutritionists

SFPs fall within the domain of nutritional interventions. The subject of nutrition is highly inter-disciplinary, with strong medical, environmental health, anthropological and economic linkages. For those not familiar with the subject, it may be useful at this point to give a brief overview of the basic nutritional principles and practice which are relevant to emergency feeding practice.

This section is therefore written to help those without a nutritional background understand some of the more basic terms and nutritional principles that arise in the subsequent text. Nutritionists may wish to pass over this section and move directly to 2.4.

Nutritional requirements

An individual's nutritional status is determined by the adequacy of their energy and nutrient intake and utilisation in relation to their need. At any point in time each individual has specific nutritional requirements which are a function of many variables including age, sex, ambient temperature, body size, growth, health status, and physical activity. Where energy or nutrient needs are not met, nutritional status may be adversely affected, resulting in failure to grow, weight loss and/or micro-nutrient deficiency.

The main component of individual energy needs is determined by the basal metabolic rate (BMR) which is a function of all the activities that take place within the human body, for example, digestion, heat production, kidney function, etc. It is normally defined in terms of the amount of energy (usually measured in kilo-calories) that is required to drive all bodily (metabolic) activity when an individual is at rest and has not eaten a meal for at least 12 hours. Individual BMRs can vary enormously and are largely determined genetically, although numerous external factors can have a temporary effect, e.g. stimulants.

Apart from energy, human metabolism also requires specific nutrients. For example, proteins are required for tissue growth and repair, while fats are required

for absorbtion of certain nutrients and as structural components of cells. An array of micro-nutrients, e.g. vitamins and mineral elements, are also needed for very specific cellular activity, such as transporting compounds within cells. One overriding nutritional principle is that the need for adequate energy intake must be met before other nutrients can be properly utilised by the human body. Thus, if energy intake is inadequate, protein will be broken down and used as an energy source rather than for growth or tissue repair. Fats are twice as energy-dense as proteins or carbohydrates, so that fat-containing foods have an important role in providing sufficient calories for young children whose small stomachs prevent the consumption of large meals.

While energy and nutrient intake must satisfy basic metabolic needs, other additional nutritional needs are created by growth and pregnancy, and lactation. Poor nutritional status and various diseases also create additional nutritional demands as the need for catch-up growth and higher metabolic turnover increase requirements. Physical activity also creates extra nutritional needs although this usually makes up only a surprisingly small proportion of overall energy requirements, generally less than 30%. Cold air temperatures also create additional needs. Thus, in assessing food requirements for any given population an extra 5% energy requirement should be expected for every 5°C that the minimum temperature falls below 20°C, until adequate fuel, shelter and blankets are available.

What happens when nutritional intake does not match requirements?

The literature normally distinguishes two types of malnutrition: protein-energy malnutrition (PEM) and vitamin and mineral deficiencies.

When an individual's energy intake is insufficient to meet their requirements, carbohydrate stores and fatty tissue start to be broken down and used as the primary energy source. If the nutritional deficit continues, tissue protein, e.g. muscle tissue, will be broken down and, among children, growth will be adversely affected. Vital organs such as the brain and kidney are protected until the very last stages of severe malnutrition.

PEM can manifest itself in different ways. Marasmus is the form where the individual becomes extremely thin. In severe cases skin appears to hang loosely from the bones and the eyes become sunken, producing an `old man's face' in the case of young children. Another form of PEM is kwashiorkor, where the most noticeable sign is oedema or swelling caused by fluid in the tissues. The swelling usually starts in the lower limbs but can occur all over the body. Hair also becomes lighter in colour and may fall out easily. Frequently, malnourished individuals can exhibit both sets of symptoms, e.g. they are thin but have swollen limbs. Such individuals are said to have marasmic-kwashiorkor. The symptoms of malnutrition caused by vitamin or mineral deficiency vary enormously, depending upon the specific nutrient deficiency (vitamin A, C or iron, etc.).

Other factors which affect nutritional status

A common belief among many non-nutritionists is that nutritional status is determined solely by the amount and nutritional value of the food consumed by individuals and that this is in turn determined by food security at the household/community level. However, an equally important determinant of nutritional status for individuals in developing countries is their health status. There is a powerful interaction between nutrition and health status, with poor nutritional status reducing resistance to infection (immuno-competence). Formerly it was believed that only severe malnutrition predisposed individuals to disease, but recent evidence now shows that mild and moderate malnutrition can result in significantly increased predisposition. Once an individual has become ill, the risk of further nutritional deterioration increases as the illness is likely to be accompanied by loss of appetite (anorexia) and the poor absorbtion of nutrients, as for example with gastro-intestinal infection. There may also be increased requirements for energy and specific nutrients as fever raises metabolic rate and as affected tissues and organs need to be repaired. The interactive cycle between nutrition and health status is now well-established and with it the recognition that health and medical interventions must accompany emergency nutritional interventions if the latter are to be effective. It should be noted that young children are especially vulnerable to malnutrition-related infection. This reflects a number

of factors: children have less mature immune systems (i.e. have built up less immunity); it is difficult to ensure adequate nutrient intake in children where the family diet is low in energy density or lacks diversity and children have a less developed sense of personal hygiene.

The health environment in which many emergency SFPs have to operate is often extremely poor, with high levels of infectious disease such as diarrhoea, acute respiratory infection, TB, measles, etc. Populations in camp situations or resident populations affected by drought-induced food insecurity often find themselves in extremely hazardous health environments where there may be overcrowding, lack of clean water and poor sanitation facilities (latrines and garbage disposal). In such environments, the levels of disease present in the population can rapidly increase, thereby creating health and nutritional crises in spite of adequate supplies of food.

In the light of the above discussion, it is clearly important to consider the relative importance of both disease and food insecurity in relation to nutritional status for each emergency situation. Food insecurity will be determined by factors such as the impact of drought or conflict on food production and trade, seasonal availability and prices of foods and the effect of the emergency on traditional coping strategies. Clearly, where displacement has occurred it is highly likely that food security will be adversely affected. While it will be virtually impossible to quantify precisely the relative impact of food insecurity or disease patterns on overall nutritional status, information such as the incidence of disease, case fatality rates, adequacy of sanitation and water availability will all help determine whether an emergency response to protect nutritional status should concentrate on food security interventions alone or be implemented in conjunction with health and sanitation interventions.

Another factor which is often overlooked in relation to its role in determining nutritional status is that of parental care. Infant feeding practice and health care by parents can have a significant impact on the nutritional status of children. A typical problem emerges at weaning age when children graduate from breast milk to solids. At this stage parents may not provide sufficiently energy-dense meals for small stomachs, so that children receive insufficient amounts of energy.

Bacterially contaminated food may also be served if, for example, it is left out too long or serving utensils are dirty, thereby increasing the risk to young children of diarrhoea. Health care for children who are ill may also be poor, for instance food may be withheld when a child is ill. The reasons for poor parental care may be a lack of awareness of good practice, a lack of time to feed a child several small meals a day, and insufficient resources (water, fuel or money) to ensure hygienically produced or sufficiently energy-dense foods. In emergency situations, wider social support networks may break down, adversely affecting the ability of parents and families to care for young children. This can be a major contributing factor to malnutrition. In more extreme cases significant numbers of children may be abandoned or orphaned.

How is nutritional status measured?

The main method of assessing nutritional status in children is to employ anthropometric measures that reflect adequacy of growth and weight gain. Nutritionists have several different ways of doing this. The most frequently used method is to weigh an individual and compare this weight for a given height with international growth standards based upon weight-for-height measurements of a healthy Western population. The most commonly used standards are the NCHS/CDC/WHO standards. Weight-for-height reflects a child's recent weight gain, and therefore gives an indication of a recent failure to gain weight or weight loss.

The international weight-for-height growth standards have been constructed for children up to a height of 130 cms (equivalent to the height of an average child of 9-10 years). A child who is between 70 and 80% of the weight-for-height standard is said to be mildly or moderately malnourished or `wasted', while a child who is less than 70% of the weight-for-height and/or has oedema is said to be severely malnourished or wasted. These definitional cut-offs have been adopted following the accumulation of evidence during the 1970s which showed that risk of illness and death began to increase below the 80% weight-for-height point and increased significantly below the 70% weight-for-height point. However, more recent findings suggest that the risk of illness and death associated with wasting is highly

location-specific and depends on many factors including the disease environment and the genetic make-up of the population, so that cut-off points for risk are not hard-and-fast but vary between different situations. Nevertheless, in the absence of location-specific cut-off points, nutritionists continue to use these levels of wasting as markers for when risk is likely to increase significantly. Consequently, SFPs, which aim to restore nutritional status in mildly and moderately malnourished individuals, traditionally use less than 80% weight-for-height as a cut-off point for deciding when an individual would benefit from, and should therefore be enrolled in, an SFP. Children are normally discharged from SFPs when they have attained a weight-for-height of more than 85% and have maintained this for a number of weeks.

Two other commonly used nutritional status measures are weight-for-age and mid-upper arm circumference (MUAC). Weight-for-age gives a measure of shortness (stunting) as well as wasting and therefore may reflect past episodes of malnutrition which resulted in stunting. Taken on its own, weight-for-age can lead to confusion over whether the individual is currently malnourished. It is also often difficult to determine age accurately in field conditions (for instance, parents may not remember the month of birth accurately). Consequently this indicator is not recommended for use in nutrition surveys or for determining the eligibility for enrolment in SFPs. However, some health systems in developing countries continue to use Weight-for-age measurements as a way of identifying malnourished children who need to be included in SFPs operated through MCH programmes.

Mid-Upper Arm Circumference (MUAC) measurements give a measure of muscle mass and can be rapidly obtained. Furthermore, such measurements, which are taken with an arm-band, do not require the expensive equipment, such as weighing scales and stadiometers, needed for measuring height. However, MUAC measurements are particularly prone to inaccuracy and consequently MUAC is generally only recommended for rapid screening of populations. Weight-for-height measurements are therefore recommended for most situations.

Anthropometric methods for assessing nutritional status in adolescents, adults and the elderly are much more poorly developed than those for children. Body Mass Index (BMI) (weight divided by height squared) is a recommended measure, although recent evidence suggests that certain recommended standards against

which to compare results are not generally applicable. A further difficulty with BMI measurements is that they are very difficult in the elderly due to stooping and in the severely malnourished due to contractures (limbs stiffened into bent positions by long periods of immobility). In the light of these difficulties, other methods of assessing the nutritional status of adults and the elderly in emergency situations are currently being explored.

While the above measures all indicate growth failure and weight loss of individuals, predominantly as a result of insufficient energy intake, there are also numerous measures for assessing micro-nutrient status. Deficiency of micro-nutrients can lead to specific symptoms. For instance, night blindness and corneal scarring are associated with vitamin A deficiency and scurvy is associated with vitamin C deficiency. Clinical assessment of micro-nutrient status requires some diagnostic skill and experience. In many instances deficiency may lead not to overt clinical symptoms but to a state of `sub-clinical' deficiency which has other affects such as reducing the individual's resistance to infection. Biochemical assessment involving blood samples and laboratory testing can be used to identify sub-clinical deficiency and to confirm diagnosis. However, many emergency situations preclude use of this type of biochemical analysis at the field level, although rapid `blood-spot' techniques are currently being developed for a number of micro-nutrients.

2.4 How do emergency SFPs fit in with other emergency interventions?

Given the enormous diversity of emergency situations, it is difficult to generalise about the role of emergency SFPs in relation to other forms of emergency intervention. However, in situations where populations are entirely dependent on outside intervention for all their basic needs, as is often the case with recently displaced populations, there is general consensus about which types of assistance should be given priority. Here the strategy would be to ensure that potable water needs, closely followed by general food needs, are met first of all, while also rapidly establishing disease control measures, such as carrying out measles vaccinations and ensuring adequate sanitation. The provision of shelter and

essential non-food items such as water containers, blankets and possible fuel sources for cooking would also be a priority. Where there are large numbers of severely malnourished individuals, therapeutic feeding facilities may also need to be set up quickly in order to minimise loss of life. Emergency supplementary feeding facilities might then be established, once these other forms of relief are in place. However, the reality is that this type of prioritisation does not always take place. In some cases this reflects weak co-ordination between implementing agencies or poor needs assessments so that important sectoral needs may be overlooked. In other situations, this type of prioritisation may not be necessary, for instance where the emergency involves a resident population which still has reasonable access to water but has exhausted its food stocks and its ability to procure food.

Other types of feeding programme: General and Therapeutic Feeding Programmes

Any event such as drought, war or flood which affects access to food will affect all age groups. In many situations the production, procurement and coping strategies of affected communities will give them access to some food. Where such access is inadequate, the objective of any food distribution programmes should be to complement the food which is available locally. Where the affected community has no access to food or only to negligible amounts, the basic rations may have to be provided entirely by relief agencies. Feeding programmes which target all groups within a population are described as general food distribution or general ration programmes. Such programmes are inevitably much larger than SFPs, as all age groups are targeted, and are consequently far more demanding of the registration, logistics and monitoring capacity of the implementing agencies. Emergency general ration programmes cannot therefore be implemented by all relief agencies and are often undertaken by the larger agencies with experience of such demanding logistical operations.

In most circumstances where the affected population is largely or entirely dependent upon food aid, the international relief community attempts to provide a general ration composed of at least three commodities (cereal, beans and oil).

The amounts supplied per individual are usually based on the assumption that in the region of 2,000 kcals of energy per person per day are needed for an average population. As will be discussed later, this target level may vary, depending on a number of factors.

In contrast, therapeutic feeding programmes, which cater for severely malnourished individuals aiming to `rehabilitate' them and promote weight gain by providing a full ration in conjunction with medical care through intensive and controlled feeding, will involve a relatively small number of beneficiaries, as even in severe emergencies, the numbers of mildly and moderately malnourished individuals far exceed severe cases. Situations where more than 10% of the under-fives are severely malnourished are rare, while situations where 30% of the under-fives are mildly or moderately malnourished are common.

Usually therapeutic feeding programmes will be set up only when there are a substantial number of severely malnourished individuals. Where numbers of severely malnourished individuals are limited, it is usual for relief agencies to refer cases to the nearest hospital where the necessary specialised care can be provided, rather than establishing new and separate therapeutic feeding facility.

Emergency SFPs are often linked to therapeutic feeding programmes. The normal admission criteria used in therapeutic feeding are to admit children who are below 70% weight-for-height or show signs of kwashiorkor or oedema. Children are discharged when they are healthy, gaining weight steadily and at least 80% weight-for-height. Generally, they will be referred to SFPs for continued supervised feeding.

Therapeutic feeding requires experienced and specialised staff to administer it as it involves complex medical and nutritional care, although this is not always possible in extreme emergency situations. The cost per beneficiary is therefore likely to be substantially greater than for SFPs. On the other hand, general feeding programmes which mobilise and allocate much larger quantities of food are probably substantially cheaper than SFPs in terms of cost per unit of food delivered, as bulk quantities of food are involved. Unfortunately the information

available on the relative costs of these different types of feeding programme is very patchy, and it is not possible to indicate the average costs per unit of food delivered or per beneficiary.

Another category of feeding programme is where rations sufficient for the entire family, so-called `family' rations, are targeted only on those families with malnourished children. Such programmes are sometimes referred to as Nutrition Intervention Programmes (NIPs). The rationale for this type of programme may be that there is insufficient food to implement a full general ration for a population and the belief that those families with malnourished children are most in need of a general ration. It may also be argued that the comparatively large `family ration' provided through a NIP encourages many more parents to bring their children to the distribution centre where their status can be monitored. Furthermore, the large `family ration' increases the chances that the malnourished child will receive the full supplement and reduces the chances that it will be shared with other family members or used to substitute for one of the child's meals.

One of the major difficulties with NIPs is that they are only really workable where the emergency is not particularly severe. In severe situations the number of families qualifying will increase so rapidly that in a short space of time the programme will be transformed into that of a population-wide general ration. Also, in severe emergencies this type of `family' ration would create enormous pressures on families to starve children deliberately in order to qualify for admission to the programme. The use of anthropometric/`scientific' criteria to determine which families qualify may appeal to health officials and Western concepts of objectivity but may be resented by the affected communities whose views on what constitutes a `needy' family may be based on many considerations other than just child malnutrition alone. Indeed, it is now generally understood that the nutritional status of individual children may say very little about relative household food security and food aid needs and may reflect other factors such as disease status and parental care. However, in situations where relief agencies are faced with insufficient resources to implement a general ration they may be obliged to implement a NIP. For some communities the use of child malnutrition as a criterion for selecting families may be more acceptable than other methods such as

agency assessments of household resources. The problem of limited food aid resources and the ability of larger rations to increase participation in, and coverage of, emergency SFPs mean that several agencies continue to implement NIPs or NIP-like programmes in their relief operations (see Box 22).

2.5 What priority should be given to emergency SFPs in comparison to other types of sectoral intervention?

A common experience in relief operations is for agencies to be faced with an afflicted population with a broad range of sectoral needs which they are not able to meet because of their limited capacity, and to be forced to select particular sectoral interventions upon which to concentrate. For instance, in a context of drought-induced food insecurity, an agency may find the affected population in urgent need of a general ration, supplementary and therapeutic feeding, an immunisation programme, agricultural rehabilitation measures and water for drinking, cooking and hygiene purposes. The type of intervention which the agency selects will inevitably be strongly influenced by its own specialisation, experience and resources and through coordination with other agencies over their respective sectoral responsibilities. Unfortunately, in the real world coordination is sometimes haphazard, with agency decisions being based less on comparative advantage and more on considerations of political pressure and expediency. As a consequence particular types of intervention may be ignored or implemented too late. In retrospect it may be that some of the programmes implemented should not have received the priority they were given.

As already discussed, the context of drought-induced food insecurity differs from that of displaced populations in camps where provision of a safe water supply is usually regarded as a priority even before adequate food supplies are secured. It is also generally apparent to relief agencies whether displaced populations in camps have access to adequate water supplies in relation to the WHO standard of 20 litres per person per day.

There are no rules for agencies to follow in deciding what priority should be accorded to different types of sectoral interventions. Rather, the decision should be more of a process of weighing up the different factors relevant to the particular context in which an agency finds itself. In order to illustrate the process and the possible factors, the remainder of this section considers whether priority should be given to water interventions rather than emergency SFPs in the context of resident populations experiencing drought-induced food insecurity. The reason for focusing on the water v SFP question in this context is that recent experience shows that in areas of drought-induced food insecurity, water interventions are often given less priority or implemented later than emergency SFPs and that in the final analysis this may not have constituted the most effective use of resources. Indeed, as part of retrospective evaluation populations have indicated that they would have preferred water interventions to have been given more priority and that they would have been of the same importance to them as the provision of supplementary foods.

Could the nutritional impact of a water intervention for a resident population be greater than that of an emergency SFP?

The nutritional and food security impact of lack of water can be considerable. In its most extreme form population groups will be forced to migrate to areas where water supply can be guaranteed. It is generally recognised that displacement of populations to water sources can lead to massive overcrowding and pollution of water sources, with consequent serious health problems. Where populations are still able to find water within walking distance of their village, the chances are that the available water sources will become over-used, with similar problems of overcrowding and related health problems. Often populations, usually the women, will have to walk very long distances to obtain scarce water and may spend 6-8 hours a day in its collection. The implications for child care and their extra calorie requirements have never been properly measured but must be considerable.

Where water shortage occurs it is often the case that the quality of the water utilised declines considerably, with formerly unused sources being drawn on of necessity, with serious adverse effects upon health. Poor quality water greatly increases the risk of diarrhoea and dysentery.

There is a clear, but as yet unmeasured, energy cost for children and the family as a result of the extra health problems and work demands when water is scarce and the care of children reduced as more time is required for water provision. As emergency SFPs rarely provide for more than 10% of household caloric needs, it may be that in some situations improving access to water is a more cost-effective intervention on nutritional grounds alone. When one also takes into consideration that improving water provision by, for example, well-digging or bore-hole pump rehabilitation may be a longer-lasting intervention than an SFP, especially if livestock mortality is reduced, then arguments for prioritising such interventions become even stronger.

Box 1

Results of Evaluations of Emergency SFPs in Southern Zambia and Northern Sudan

Post-emergency evaluations of NGO emergency SFPs in southern Zambia during 1992 and Kosti Province in Sudan during 1989 indicated that in many villages water needs were desperate, yet a water programme lagged behind implementation of the emergency SFP by as much as a year. In both emergencies women were spending the majority of their day (a minimum of eight hours) in water collection and carriage, its quality was often poor, diseases related to water shortage (e.g. dysentery and scabies) were endemic, and many livestock had perished from lack of water. In both cases it would have been possible to rehabilitate water sources closer to some of the affected villages, while the simple and low-cost initiative of providing donkey carts for transport would have had a tremendous impact on time management and the conservation of women's energy. Interviews with beneficiaries in southern Zambia found that over 40% of respondents considered that a water intervention would have been more useful to their community than an emergency SFP.

The reasons why water programmes seem to have been neglected in the past appear to fall into three main categories:

1. the lack of information about the hardship caused by water shortage and of analysis of the nutritional and health implications of the shortage

2. relief agencies' lack of comparatively skilled staff and limited institutional capacity to implement a water programme

3. the fact that planning and implementing water programmes are technically and managerially more demanding than establishing emergency SFPs.

Another reason why emergency SFPs might be preferred to water interventions could be the desire of the agency to work through community structures rather than directing its resources mainly through a government department, as would often be the case with a water intervention.

The above discussion illustrates the need to safeguard against over-prioritising emergency SFPs in relation to other forms of intervention, e.g. where improved water provision for resident populations may be equally urgent, and why over-prioritisation may occur. This analytical approach may be a useful model when assessing the relative priority to give to emergency SFPs in relation to other types of sectoral intervention.

2.6 What current guidelines have to say about emergency SFP implementation and design

In designing and implementing emergency SFPs relief agency personnel often take decisions which do not conform to, or are not addressed by, existing guidelines which are often excessively generalised and do not represent the full range of situations faced by the personnel. Consequently, discerning what constitutes `good practice' requires an awareness of what the existing guidelines recommend and where and under what conditions such recommendations are inappropriate or unhelpful. This section therefore briefly reviews the recommendations contained in existing guidelines (see Annex 1) on key policy and programming decisions.

When to start and phase out emergency SFPs and where to target programmes

Existing guidelines all recommend that the results of nutritional (anthropometric) surveys should be used in conjunction with other information to determine the need for emergency SFPs. Thus, trigger points are suggested, so that if between 15 and 20% of the under-five population are malnourished, then SFPs should be established for all vulnerable groups. Guidelines also advocate using information on the general ration provided by relief agencies and the amount of food available to the beneficiary community through subsistence and coping strategies in order to determine the need for emergency SFPs. For instance, if the general ration were less than 1,750 kcals (less than 85% of minimum requirements) then it is recommended that preventive SFPs should be established for all vulnerable groups[4]. Other information which guidelines recommend should be included in decisions about whether to establish emergency SFPs concerns the extent to which mortality rates have risen above the normal rates for the area and season, and the existence of epidemics such as measles or shigella.

Where guidelines cover the phasing-out of programmes, they generally suggest using the same sets of indicators, e.g. when rates of malnutrition are less than 15% or the general ration and other food sources are providing above 1,750 kcals per person.

As will be discussed in later chapters, the practice at field level is often significantly different from that recommended in guidelines, so that decisions about whether and where to open or close SFPs are often taken on the basis of quite different sets of criteria.

Who is to receive the supplement?

Existing guidelines generally advocate that curative or preventive SFPs should be mainly targeted on physiologically defined vulnerable groups, determined by their age, gender and medical condition. These groups are identified, in order of priority as children under five years of age, who are considered most prone to malnutrition,

[4] It is worth noting that such recommendations contradict those policies and published guidelines which advocate that SFPs must supplement adequate general rations in order to be effective and that adequate general rations must be established before emergency SFPs are implemented.

and pregnant (last trimester of pregnancy) and lactating women (up to six months after delivery), who have additional nutritional requirements. Other target groups identified in guidelines for SFPs include the old, social cases, twins, orphans, disabled persons and medical cases such as patients with TB or recovering from measles. The inclusion of these `other' target groups in supplementary feeding is generally seen as of lower priority and only recommended where sufficient resources remain after including all eligible under-fives and pregnant and lactating women.

Although there may be wide variation in emergency situations, a good rule of thumb is that 20% of any given developing country population consists of children under five years of age, with 3.4% pregnant (last trimester) and lactating women. Thus, in a population of 20,000 with a prevalence rate of 15% malnutrition in children under five, 600 children and 680 women would be eligible for supplementary feeding.

On-site versus dry take-home rations

SFPs normally take one of two forms. On-site feeding is where beneficiaries are fed a cooked supplementary ration at a feeding centre on a daily basis, whilst dry take-home ration programmes allocate a dry uncooked supplement which may be collected from a distribution point on a weekly, fortnightly or even monthly basis. Existing guidelines identify situation-specific advantages and disadvantages of both types of programme, although most current opinion amongst professionals is that dry take-home feeding is preferable in the majority of instances.

Existing guidelines also specify that the type of food allocated in SFPs should be appropriate for weaning age infants and children under five years of age, i.e. it should be energy-dense, high in protein and a good source of essential vitamins and minerals. Children who are malnourished need additional food for catch-up growth and weight gain. The food must be energy-dense and palatable as young children have small stomachs and consequently small appetites. A food is said to be

energy-dense if more than 20% of its total energy is from fat. Appropriate high-energy drinks and porridge may be made from specially processed or blended foods, e.g. corn soy milk, dried milk powder, flour and oil. Sugar can be added to improve the taste. Foods given to mothers to take away and prepare at home should also be energy-dense. This may be achieved by preparing a `pre-mix' of dry ingredients such as cereal flour, bean flour, milk powder, CSM or sugar, to which the relief agency may add oil.

Existing guidelines differ on the size of supplement to be allocated to individual beneficiaries, with the recommended amount ranging from 400 to 800 kcals. Some guidelines advocate aiming for a larger supplement where the general ration is below a certain level, so that part of the supplement becomes a replacement of the general ration. Guidelines also advocate providing a larger ration for dry take-home feeding (1,000-1,600 kcals) on the assumption that some of the supplement will be shared with other family members.

In practice the size of ration allocated by agencies varies enormously. Practice tends to be governed by resource availability, length of time that feeding centres can be kept open and consequently, number of possible feeds, as well as general ration considerations.

Data requirements for monitoring individuals and programmes

It is considered standard practice to collect information during the implementation of emergency SFPs for the purpose of monitoring the growth performance of individuals and the effectiveness of the overall programme. Guidelines advocate that programmes should keep a record of basic information for each person admitted to the programme, including registration number, name, age, sex, height, weight, and date of admission. Regular weighing and measuring of children should then take place to determine whether their weight-for-height is improving and that the rate of improvement is sufficient. Expectations are that in SFPs malnourished children should show a positive weight gain of between 5 and 10 gms per kg of their body weight per day.

Most guidelines recommend the collection of a core set of indicators in order to monitor and evaluate overall programme effectiveness. Key indicators are:

- attendance/default rate, e.g. the percentage of children not attending regularly or who drop out of the programme (default)
- recovery rate, e.g. the number of children successfully discharged in the previous month as a proportion of the number registered at the beginning of that month
- mortality rate
- coverage rate, e.g. the proportion of eligible children in the population enrolled in the programme
- improvement rate, e.g. the number of children who gained weight during the month as a proportion of the total number registered at the beginning of that month
- mean length of stay until discharge, e.g. how long it took for the child to reach the discharge weight

However, very few guidelines actually set target levels for these indicators.

Health care

A minimum level of health care is essential if SFPs are to be effective. Guidelines for emergency SFPs therefore advocate the provision of basic health care including: the provision of medication for de-worming; malaria prophylaxis; oral re-hydration therapy; measles vaccination; anaemia (for on-site feeding programmes only) and vitamin A prophylaxis and treatment.

2.7 Why focus on emergency SFPs in this review?

Whilst there are few **major** controversies about the need for therapeutic feeding programmes and the ways to implement them, emergency SFPs still provoke

vigorous debate about whether and how such programmes should be implemented[5]. This review will therefore cover many of the areas of controversy and, where possible, will suggest ways in which such controversies might be resolved. It will also address issues that arise out of the changing emergency contexts within which these programmes are currently operating.

There are four main sets of issues which will be held over for more detailed consideration in subsequent chapters. These are:

1. When and under what circumstances should an emergency SFP be started and when should it be stopped? Key questions here are what information can realistically be used to determine opening and closure decisions. Equally crucial is consideration of whether SFPs should be implemented when the general ration is inadequate and how programmes should be modified to take account of this. This is an issue which recurs throughout this review.

2. How should programme design and choice of target groups reflect different emergency contexts? There has been a long-term debate about the relative advantages and disadvantages of on-site versus dry take-home SFPs. This discussion now needs to be extended to take account of the many non-refugee scenarios within which agencies are currently operating. Choice and prioritisation of target groups for emergency SFPs also need some re-examination in the light of agency experience and changing emergency scenarios. Certain assumptions may also need to be challenged.

3. What data need to be collected and analysed to monitor and evaluate emergency SFPs adequately? There are many potential indicators that can usefully inform decisions about programme efficacy, yet guidelines recommend use of only a core set of indicators. Furthermore, different types

[5] Shoham J (1995) *Towards a Revision of Emergency Supplementary Feeding Programme Practices*. A report commissioned by ODA, Centre for Human Nutrition, London School of Hygiene and Tropical Medicine.

of emergency situation may dictate the need for distinct approaches and priorities for data collection.

4. What resource considerations need to be addressed in programme planning and implementation? Infrastructural resources (roads, buildings, etc.) and agency resources (staff, professional experience, vehicles, etc.), can have a critical bearing on the success of programmes, yet are often not recognised as limiting factors until a programme runs into difficulties. Also, the need for, and means of providing, complementary non-food resources, such as water and health inputs, are often not properly considered by agencies implementing emergency SFPs.

The following three chapters will now examine how conditions and resulting practice in the field often determine the difficulty and, at times inappropriateness following recommendations in general guidelines. Where this is so, suggestions for revising practice will be made.

3. Starting and Stopping Emergency SFPs

Introduction

This chapter reviews the appropriateness of criteria expressed in guidelines as to when emergency SFPs should be implemented or terminated. These criteria are evaluated in the context of different field-level circumstances. The appropriateness and role of emergency SFPs where general rations are inadequate is a central focus of this chapter.

3.1 What guidelines say and what implementing agencies actually do

As discussed in Chapter 2, guidelines tend to stress the importance of anthropometric trigger points and information on general ration availability as the criteria for starting emergency SFPs. Thus, high prevalence of wasting is taken as indicative of the need for an emergency SFP, as such programmes can help restore weight gain in mildly and moderately malnourished children. Similarly low general ration availability, e.g. less than 1,750 kcals per person, is taken as indicating the need for preventive SFPs for all vulnerable groups, on the basis that they are most likely to develop malnutrition given food shortages at the household level. Severe public health hazards, e.g. overcrowding and poor sanitation, and high levels of contagious disease such as shigella, are other factors which guidelines recommend as additional criteria to be used in determining the need for either curative or preventive SFPs.

In reality, apart from the situation of closed refugee camps, decisions to implement or close down emergency SFPs are often taken on the basis of far less precise information.

In many instances agencies implement emergency SFPs on the basis that nutritional status in a population appears to be declining owing to some threat to food security, and that there is relative certainty that crisis/trigger levels of malnutrition will eventually be reached if there is not some form of intervention.

Box 2

Emergency SFPs for the displaced populations of Khartoum and Mozambican refugees in Malawi

Since the mid-1980s drought in Western Sudan and the civil war in the south of the country have forced over 2 million people to settle in Khartoum in search of food, security and employment. Most people settled in crowded slums of makeshift cardboard huts, in camps without sanitation or clean water. As these are displaced people and not refugees, the international aid agencies have given them only limited attention. Those international and local agencies which have worked on behalf of this displaced population have frequently been impeded by a government that has actively discouraged permanent re-settlement.

The food security of this population is largely determined by seasonal factors such as price rises and employment opportunities. Unsurprisingly, their nutritional status mirrors these seasonal factors so that at certain times of the year levels of malnutrition are fairly low, e.g. less than 10%, while at other times levels can rise to above 25%. Partly as a result of the predictability of these seasonal patterns, relief agencies have chosen to keep emergency SFPs open even when levels of malnutrition have been very low so as not to have to overcome the administrative and logistical problems of re-establishing a SFP when levels of malnutrition rise again.

Severe rains and flooding in August 1988 disrupted health programmes in many of these slums and created the need to establish curative emergency facilities. One indigenous NGO subsequently established, over a period of time, emergency supplementary feeding in 8 settlements serving a population of approximately 200,000 people.

Box 2 (continued)

A Malawi NGO, which began working in the refugee impacted area of Dedza in Malawi following the rapid influx of over 100,000 Mozambican refugees in January 1988, adopted a similar policy of keeping open the emergency SFP as a form of emergency preparedness in spite of low levels of malnutrition.

One of the major programme objectives of this agency was to strengthen the existing government infrastructures, especially within the MoH, which provided primary health care services to both Mozambicans and locals in the refugee impacted areas. Following numerous reports of increased levels of malnutrition the agency established five feeding centres during 1989 in areas where the incidence of malnutrition seemed to be particularly high.

In keeping with the self-help policy in Malawi, political leaders and village health committees were included from the inception of the feeding programme in order to ensure a high level of community participation. Each centre initially served approximately 300 children.

However, in spite of the fact that nutritional surveys in mid-1989 and 1990 found only 3% levels of wasting, the implementing NGO continued to operate the emergency SFP on the basis that a fresh refugee influx was possible at any time.

In other instances a poor harvest is taken as sufficient basis, even though there is no evidence of nutritional decline but simply the fear that, as the months progress, nutritional stress will manifest itself. Another typical scenario is where inadequate agency resources or insecurity prevent any type of survey, but it is readily apparent that malnutrition is a significantly increasing problem, perhaps as a result of the number of cases of malnutrition being seen at the health centre. A further justification for implementing emergency SFPs which is increasingly being cited by agencies is that the composition of the general ration is often so unbalanced (i.e. providing cereals only) that micro-nutrient-rich foods are required by those most vulnerable to micro-nutrient deficiency.

Similarly, decisions about whether to close down feeding centres often need to be taken on the basis of impressionistic data rather than on "hard" quantitative survey

data which may not be available or obtainable, as well as sometimes on the basis of political and institutional factors. Consequently, some agencies will close down programmes on the basis that there has been a relatively good harvest, even though rates of wasting may still be high and in some cases higher than when the programme began. In contrast, the reasons cited for keeping a programme open even though anthropometric data show very low levels of malnutrition, have often been that threats to food security may be seen as seasonal. Similarly, the difficulty of getting permission to set up the programme in the first place creates a reluctance to close it down, as there may well be a need for the programme at some point in the near future.

These field-level practices are often justifiable even though they are not thoroughly addressed by the guidelines. In the light of this, a number of general points can be made here with regard to factors that need to be considered in decisions about opening and closing emergency SFPs.

3.2 A dependence on anthropometric surveys?

Anthropometric survey results are not essential to decisions about programme implementation and closure. Other information, such as the degree of harvest failure and speed of nutritional decline, is intuitively and rightly often given more weight in decision making. In fact, anthropometric data can often be mis-interpreted in relation to identifying the need for a SFP, and the priority to be given to setting it up. For example, endemic disease may cause high rates of malnutrition (wasting) in situations of reasonable food availability, while high child mortality, or out-migration of the most vulnerable families prior to a survey may lead to low levels of malnutrition amongst the remaining under-five population even though there is an urgent need for supplementary feeding. Anthropometric data must therefore always be contextualised with other information.

Furthermore, in many situations anthropometric surveys are either prohibitively expensive, in terms of money or staff, or simply not feasible logistically. For example, in areas of conflict or siege it may be almost impossible for agencies to

undertake surveys. Here, agencies may need to rely on the evidence of increasing numbers of cases of malnutrition or micro-nutrient deficiency seen at health centres. In instances where surveys are not possible, it may be wise to collate information from health centres showing the normal numbers of admissions for wasting and micro-nutrient deficiency which may be used as a baseline for comparison with future rates. Ideally, this should be done before an emergency arises as a form of disaster preparedness.

On the whole it is considerably easier to conduct anthropometric surveys in camp situations where limited distances are involved and where it should be possible to obtain reasonably accurate population data on which to base sampling procedures. In the case of emergencies occurring in rural areas where populations are still resident in their homes and in situations where there is insecurity such surveys are likely to become highly problematic and may not be justified.

Ultimately, when weighing up the potential value of implementing an anthropometric survey in order to help determine the need for emergency supplementary feeding, the above considerations may also need to be balanced by the other functions served by such surveys. Data on levels of malnutrition do not simply indicate the **need** for emergency SFPs but also provide information which can be used to calculate the likely tonnages of programme food required and whether sufficient numbers of feeding centres are being planned, given the prevalence of malnutrition. Anthropometric survey data can also be used to estimate the coverage of the programme (i.e. whether the SFP is reaching most of those eligible for feeding) and the need for a therapeutic feeding programme if there is high prevalence of severe malnutrition.

3.3 Is it really possible to calculate the amount of food to which households have access?

In most situations it will be extremely difficult to quantify the calorie equivalent of the foods to which households have access. Even in closed camp situations where refugees are supposedly not able to take up local employment, micro-

economies spring up as displaced populations find ways to supplement their general ration. Most camps are not closed and populations very rapidly develop coping strategies with which to supplement their received ration. These may include home gardens, petty trading, ration exchange, obtaining extra ration cards, etc. It is often the inadequacy of the general rations supplied by the international aid community which drives camp populations to find alternative coping strategies. These donated rations often comprise only cereals, legumes and oil, and are therefore deficient in certain key micro-nutrients. In addition, as a result of registration and pipeline supply problems, they frequently supply fewer calories than the minimum requirements. In non-camp situations there may be even greater diversity of coping strategies.

Consequently, guidelines which set per capita calorie receipts as triggers for emergency SFPs are somewhat unrealistic, as it is very difficult to quantify what resources are available to beneficiary populations. Attempts at quantification have been made in some emergency situations, e.g. Oxfam in the Red Sea Hills and SCF in Darfur, Sudan, in the mid-1980s. However, such initiatives require a substantial investment of agency resources in surveys and analysis, and this is often beyond the means of most implementing agencies or not a priority where speed of action is deemed critical. Furthermore, even with the best will in the world, results can often be grossly inaccurate. It is much more typical for an agency to be restricted to assessing general ration needs in terms of whether the community needs a full or partial (e.g. half) ration.

Assessment of general ration availability will usually need to be on a much more qualitative basis and might comprise rapid assessments of numbers of meals eaten per day, and variations in diet, hours spent foraging for wild foods, analysis of market prices and their effect on entitlement and quantities of food that can be obtained for a given income or exchange of assets, such as livestock. In non-camp situations this will require an agency to have some prior knowledge of an area and its people in order to have a sense of what coping strategies are available and which ones indicate severe stress and the consequent need for preventive SFPs. Agencies working in disaster-prone areas need to amass this knowledge in advance of emergencies as a form of disaster preparedness.

Box 3

General ration assessments in Kabul, Afghanistan

Since the fall of the Najibullah regime in 1992, Kabul has been the scene of heavy clashes between the various parties struggling for power. Estimates in August 1994 were that there were approximately 440,000 displaced people within Kabul, 380,000 of whom were living with relatives or friends and 60,000 others who had taken refuge in abandoned public buildings, e.g. schools and mosques. The blockade of Kabul had led to soaring prices and limited choice of foods in the local markets. A nutrition survey carried out in May 1994 found alarmingly high levels of wasting, at 34%. The international needs assessment team were unable to define precisely the general ration needs of this population. Their recommendation was therefore for full rations for those living in public buildings, and partial rations for all the other registered displaced people.

3.4 The role of political and resource factors in decisions about whether to open or close a programme

Implementation and closure decisions will also have to take account of political and resource pressures which can determine that the most needy areas fail to be served. In some situations it may be impossible to resist local or national government directives as to when and where a feeding centre should be opened. Another situation may arise where initial targeting decisions based on surveys cannot be revised, even though the geography of need has changed because of a fresh harvest, since the agency lacks the capacity to conduct a new assessment or the existing resources are fully stretched so that the programme cannot be expanded. Equally important may be considerations of population density (i.e. why open up a centre which will have only a small catchment population), existing infrastructure and road access (i.e. if an agency cannot easily visit feeding centres, then supervision will suffer), ability of the community to support the programme by providing fuel and utensils, and the priority given by the agency to supporting

existing health services and therefore to targeting through health centres rather than villages or some rapidly assembled feeding centre.

3.5 Considerations of general ration balance

Rather than the number of calories in the general ration, the nutrient content or balance might be another factor to consider in deciding whether to open an emergency SFP. This possibility is rarely addressed by guidelines and where mentioned is given very limited emphasis. Yet if the rationale for implementing an emergency SFP is that general rations below a certain caloric level predispose particular groups of the population to risk, so that pre-emptive action should be taken, then why not apply the same rationale to the micro-nutrient content of general rations?

Box 4

Emergency SFPs and the reduction of micro-nutrient deficiencies: Bhutanese refugees in Nepal

Recently, a modified SFP for the 85,000 Bhutanese refugees in Nepal was partly justified on the basis of the risk of micro-nutrient deficiency. Although this population had experienced very low levels of malnutrition for several years, their almost complete dependence on the rice-based general ration led to high levels of micro-nutrient deficiency. At one point, over 12,000 cases of beri-beri were recorded as well as cases of scurvy, pellagra, angular stomatitis and goitre. As a result, an evaluation in mid-1994 concluded that the existing SFP which only targeted referred malnourished children should be expanded to include all children under five years of age, partly because of the recent micro-nutrient deficiency outbreaks.

Ideally, any shortfall in the micro-nutrient content of the diet should be addressed by adding a micro-nutrient-rich commodity to the general ration, e.g. vegetables, fortified blended foods, or micro-nutrient mixture. However, the reality of field level is that sufficient quantities of a micro-nutrient-rich commodity for a general ration are often not available or that the technology for fortifying a general ration cannot be mobilised in a sufficiently timely manner in an emergency situation.

Thus, it may make sense to attempt to target micro-nutrient-rich foods to physiologically defined groups that are especially vulnerable to a particular type of micro-nutrient deficiency through an emergency SFP.

Similarly, in some situations general ration availability may be limited to a cereal with only small quantities of other commodities such as beans and oil. Given the requirement of young children for energy-dense and palatable foods, it may be justifiable to attempt to target the small quantities of beans and oil on children through some form of SFP.

3.6 Should anthropometric trigger levels be location-specific?

Box 5

Location-specific guidelines: an example from Somalia

Recent guidelines for targeting emergency SFPs produced in Somalia recommend that both the type of population and the time of year need to be taken into account in interpreting the results of nutritional survey data. These guidelines therefore recommend that, once a decision has been taken to implement an emergency SFP for displaced people in camps, 20% wasting should indicate the need for a preventive SFP for all under-fives, 10-20% wasting should indicate the need to target the SFP to the malnourished only, and less than 10% should rule out the need for any form of SFP. The same guidelines suggest different criteria for the rural population. Here, it is argued that targeting the malnourished only is too difficult, as it is impossible to weigh and measure all the children in a district. Furthermore, seasonality must be taken into account; levels of 15% wasting following the harvest are much more serious than in the period just before the harvest. Consequently, if an unusually high prevalence of malnutrition exists for the time of year and there are other risk factors to health, then an emergency SFP should be considered for all under-fives.

While the guidelines set trigger levels of malnutrition for establishing emergency SFPs at around 15-20%, it is worth considering how this may not always be

appropriate for some situations. Thus, in countries where levels of wasting are normally very low, trigger levels may legitimately be set at a lower level. The converse may also be true, e.g. in parts of northern Sudan levels of wasting in a normal year may be above 20%. The same reasoning may be applied to the seasonality of malnutrition, with the setting of trigger levels being dependent on normal seasonal variations. In fact, it could be argued that trigger levels need to be country- and population-specific. Furthermore, as we have already argued (Section 3.1), anthropometric trigger levels must always be interpreted in context and therefore in conjunction with other data.

3.7 Keeping programmes open when the data indicate little need

Just as there clearly needs to be a great deal of flexibility in decisions about whether to open SFPs, decisions about closure also need to be flexible. For example, if it has been extremely difficult and/or expensive to open up a programme, it may be prudent to keep it open even if food availability and nutritional data indicate that the emergency is over. This may apply particularly to situations where a future short-term threat to food security is likely, e.g. a refugee impacted area, or where significant seasonal price rises are typical.

3.8 Absence of adequate general rations

As indicated earlier in this review, there is an unresolved contradiction in the guidelines about when to implement emergency SFPs and the theoretical advisability of doing so when the general ration is inadequate.

Two main reasons are often put forward as to why it may not be prudent to implement emergency SFPs in the absence of adequate general rations. First, the supplement will probably be diverted to other family members whose general ration is also inadequate and, secondly, the supplement will not be able

Box 6

Emergency SFPs in the 1992 Famine in Ethiopia

At the height of the food emergency during the recent civil war in Somalia (mid-1992), a number of NGOs were implementing emergency SFPs and therapeutic feeding. During this period some of the highest mortality rates ever recorded in a famine were observed (in excess of 60/10,000/day) and relief programmes were operating in an extremely insecure environment with a high level of weaponry and regular skirmishes between warring clan factions.

The SFPs were operating in an environment of continuous inadequate general rations. General rations of rice and beans were distributed through feeding kitchens in villages and large towns with between 1000 and 1500 people attending each kitchen. However, the high value of the food commodities meant that the kitchens were constantly looted, so that closures were common. With each closure there was a noticeable increase in numbers at the supplementary and therapeutic feeding programmes. Furthermore, regular ambushes of food convoys by armed factions meant that kitchens often ran out of food. The kitchens were also criticised as being badly run, so that only the strong were able to get a regular meal; they were, inf fact, a bit of a free-for-all. This meant that the young, the very old and the sick often failed to get a meal. Because of the inadequate general ration agencies felt unable to discharge recovered individuals from the SFPs. As a result, numbers at feeding centres grew rapidly with some NGOs having over 3,000 individuals in one feeding centre. As a result, the supervision of feeding and the monitoring of the programmes, and thus their effectiveness, suffered enormously.

to restore nutritional status or prevent its deterioration in those groups that have nutritional needs in addition to an adequate general ration. Other often cited objections include the fact that such programmes may take the pressure off those agencies and donors responsible for supplying adequate general rations, with the result that adequate provision is delayed. Also, in the absence of an adequate general ration, there will be a reluctance in acute emergencies to discharge beneficiaries from SFPs, so that numbers may quickly grow to unmanageable proportions.

In actual fact, the guidelines vary enormously in the strength of their recommendations on this issue. One guideline argues that `selective feeding (therapeutic and supplementary) is a low priority and should only be undertaken in a life-threatening emergency once the following have been established, access to an adequate general ration...'[6] while others recommend SFPs for all vulnerable groups as a preventive measure when general rations are inadequate but that the priority should be to restore an adequate food supply and that preventive SFPs should only be implemented for a short period of time[7].

Box 7

Micro-nutrient deficiency

Poorly balanced rations supplied by the international aid community have consistently led to widespread outbreaks of micro-nutrient deficiency amongst food aid-dependent refugee populations. Throughout the 1980s refugees in Somalia, Ethiopia, Kenya and Sudan experienced repeated outbreaks of scurvy caused by lack of vitamin C, while in Southern Africa refugees from Mozambique suffered pellagra caused by lack of vitamin B3.

It is not just refugees who are susceptible to this micro-nutrient deficiency. In the area of Gode in the Ogaden region of Ethiopia, there continue to be regular reports of scurvy and vitamin A deficiency in up to 100,000 returnees and internally displaced people who have been dependent on food aid for a number of years. Since September 1992, the situation for this displaced population has been characterised by highly erratic general food distributions which supply less than one-quarter of their food needs.

Defining and measuring the adequacy of the general ration is, of course, not quite as easy as the guidelines might have us suppose. Although we know that per capita caloric needs should be in the region of 2000 kcals per day for an average population, this will vary enormously with the demographic structure of the population, its health and nutritional status, work demands, temperatures, etc. With enough information on the above variables, caloric needs can be calculated.

6 Oxfam 1992

7 Ritmeijer K and Van der Kam (1993) *Guidelines on Emergency Supplementary Feeding Programmes*. Médecins sans Frontières - Holland and UNHCR (1982) 'United Nations High Commissioner for Refugees Handbook for Emergencies', Geneva.

Obviously this type of calculation is far easier in a camp situation than where the affected population is still resident in dispersed villages. However, having calculated caloric need, there is still the greater difficulty of assessing what the intended beneficiary population can gain access to themselves, through the use of local resources, sale of assets, or exchange of donated rations. There is also the considerable difficulty of assessing the micro-nutrient adequacy of the general ration, given that beneficiary populations can exchange rations and forage for wild foods, and assessing whether this should be a consideration in deciding on the feasibility of implementing an emergency SFP. In practice, donated general rations rarely provide sufficient micro-nutrients for a population fully dependent on food aid. In fact, general ration planning rarely aims to supply a fully balanced ration and is usually based on cereals, legumes and oil. Fortunately, most emergency-affected populations are not fully dependent on donated rations. But where they are, the consequences of micro-nutrient-deficient rations can be tragic.

General ration inadequacy - an on-going and prevalent problem?

Given the enormous methodological difficulties of assessing the adequacy of the general ration, it may well be best to assess adequacy in terms of whether the planned ration, i.e. the ration that is calculated as necessary in the emergency needs assessment conducted by the international aid community (recognising that this may be quite imprecise), is actually delivered to the beneficiary population. In practice, experience over the past 10-15 years shows that general ration distributions often fall far short of those planned by the aid community. The reasons for this are enormously varied and change over time, reflecting the constantly evolving context of emergencies and international relief capacity.

Some of the reasons can be summarised as follows:

1. An increasing number of food emergencies are precipitated by civil war and insecurity which create conditions of siege that preclude normal agricultural activity and prevent access by outside agencies.

2. Lack of cash to

- make purchases of food locally or regionally in the initial stages of an acute emergency before food arrives from donor countries and
- to cover the logistical costs of programmes especially where these are exceptionally high as in land-locked countries or where expensive airlifting operations are necessary to areas cut off by insecurity.

3. Limited local or regional availability of certain commodities such as blended foods, oil and beans.

4. The continued practice on the part of some donors of directing food aid so that the WFP is denied a free hand to allocate food on the basis of perceived need. The resulting process of donor ratification can hold up its dispatch, shipping and arrival at primary distribution points.

5. Insufficient agency capacity to ensure adequate registration in refugee camps and resulting over-registration with gradual loss of support and resource provision from donors where protracted over-registration occurs. In other situations where initial registration is delayed, inequitable food distributions result in ration shortfalls for marginalised groups.

6. Lack of a system to standardise and prioritise criteria of need for emergency response by donors, so that certain countries/regions are allocated vast international resources in order to pre-empt disaster or for more political purposes, with the consequence that, when a more serious situation subsequently arises elsewhere, available resources with which to respond may be limited.

Given that the numbers of refugees and internally displaced people dependent to varying degrees on food aid continue to rise, with some estimates that the number of refugees could double in as little as six years, it seems unlikely that emergency provision of general ration will improve greatly in the near future unless commitments from donor countries are radically changed to translate into greater allocated resources and a food aid system which is needs-, rather than surplus-driven. As a consequence, NGO staff are increasingly likely to find themselves in

situations over which they have little control, and where the planned provision of general ration remains unmet. In this type of situation, the question therefore remains: how should such agencies and potential funders act with regard to implementing emergency SFPs? One way of approaching the conundrum may be to set out possible justifications for operating SFPs in the absence of adequate general rations, and then to consider whether there are ways in which some of the problems generated by operating this type of programme can be addressed by means of programme design.

Possible justifications for implementing emergency SFPs in the absence of adequate general rations

While recognising that the adequacy of general ration should be secured first, the reality at field level is that this is often beyond the sphere of influence of the majority of relief agencies. Where this is the case, a combination of the following justifications for operating emergency SFPs in a context of inadequate general rations might apply (Annex 2):

1. Agencies and their staff may feel that they must do something in an acute emergency and that their size, experience, and resource base allow them to undertake only this type of limited activity. Many agencies will be working in some kind of developmental activity when an emergency arises. They will be unable to implement a general ration distribution and will have limited capacity to ensure that an adequate general ration is supplied by other agencies, e.g. the UN or large NGOs. So they can choose either to continue with their development activity, which will become increasingly ineffective in an acute crisis, or to leave. Most humanitarian agencies are unlikely to choose the latter option.

2. The programme can act as a holding operation whereby under-five mortality is reduced, by keeping malnourished individuals at a weight associated with minimum risk of illness or death until better general ration provision is secured.

3. The programme is preventive and is targeted on groups believed to be at heightened nutritional risk because of an inadequate basic diet, on the assumption that adequate general ration provision will eventually be secured.

Box 8

Implementing a general ration programme alongside an existing SFP: one experience

One NGO operating SFPs in the displaced camps around Khartoum found itself in a situation where enough food had been donated to it to implement a five-month general ration of sorghum, beans and oil. However, the programme quickly became unmanageable with over 2,800 beneficiaries, and interfered with the SFP activities. The nutrition assistants had to spend a lot of time on this programme at the expense of other SFP activities, e.g. home visiting and nutrition education. This was partly due to transport and storage problems which continually occurred in the general ration programme and took time to solve. There were also frequent disputes over targeting at each distribution. In addition, because of the expanding numbers, the beans and oil ran out before the sorghum. As a result the agency chose to terminate the general ration which it believed was needed less than the emergency SFP.

4. The programme is perceived by the agency as providing a high-profile activity which can be exploited in terms of publicity to generate funds and to satisfy donor client groups. The activity usually involves malnourished children and this has immediate and unique emotive impact which can be exploited through the media and can serve as an excuse for bringing in visiting dignitaries or donor representatives.

5. The SFP provides the opportunity to have a field presence and to use this to monitor general ration adequacy. It also provides data which can be used as a tool for lobbying for better general ration provision, e.g. data on numbers of presenting cases of malnutrition can be used to indicate an unstable situation.

6. In situations where there are large numbers of severely malnourished individuals, therapeutic feeding facilities need to be established as quickly as possible, irrespective of the adequacy of general ration, in order to prevent large-scale loss of life. As therapeutic feeding includes a SFP component for those recovering who are still in a mildly or moderately malnourished state, it might be considered economically prudent to use the pre-established infrastructure for the supplementary feeding of those who have not passed through the therapeutic feeding programme.

7. As SFPs are operated by means of an infrastructure where it is relatively easy to account for food distributions, donors and implementing agencies may favour such programmes where lack of field-level staff and resources precludes proper monitoring of a general ration distribution programme.

8. Agencies working primarily in the medical sector in an emergency may need to operate SFPs through the health infrastructure if the medical intervention is to be successful. It is clearly pointless to ignore feeding in medical treatment if underlying malnutrition is a cause or exacerbating factor of the illness.

3.9 Implication of operating emergency SFPs in the absence of adequate general rations

Having justified this type of programme while recognising that its implementation will take place in less than ideal circumstances, the following considerations and decisions may be necessary to improve programme design and efficacy (Annex 2).

1. This type of programme may cause intra-household targeting conflicts, i.e. if a dry take-home ration is distributed the food may be shared with other family members, while if an on-site feeding programme is operated the individual may be denied a meal at home as he/she has already been fed (meal substitution).

Consequently, a primary justification for this type of programme is to try to influence the intra-household targeting process. It is therefore especially important to monitor the impact of this type of programme on intended beneficiaries in order to determine the level of success and to identify whether the size and type of supplementary ration and the design of the SFP are suitable. At the same time, the design of SFPs in these circumstances must take account of, and respect, intra-household choices with regard to how to participate and who should get the additional food. There must therefore be no sense of coercion in such a programme. If the food is mainly shared or substituted in spite of efforts to persuade and `educate' then this must be respected. The evidence from SFPs in non-emergency situations is that there are strong socio-economic/cultural factors which override the targeting of physiological needs so that, for example, food is diverted to males and the economically active. Evidence also shows that the energy gap in the population's overall general ration and the quantity of supplement determine the impact/weight gain on SFP beneficiaries, so that the size of the general ration must be taken into account in setting the size of the supplementary ration.

It is almost axiomatic that, before the programme is put into operation, agencies must expend resources in explaining why this type of targeting is necessary and must also evaluate the likely beneficiary compliance through interviews with prospective beneficiaries. The degree of acceptance of this type of programme may be determined by phenomena specific to the country or population group, as intra-household targeting may be culturally alien or there may be an important economic rationale which renders this type of programme design ineffective. Where a significant proportion of intended beneficiaries express resistance, then agencies must be prepared to consider some other form of feeding intervention.

2. Increasing the size of the supplementary ration may reduce the impact of sharing and substitution and ensure that the individual targeted receives an adequate supplement. Many agencies follow this practice and provide far more than the normal 400-1,600 kcals supplement. However, there are risks

and legitimate criticisms associated with this type of strategy. These include the following: in severe food emergencies, parents may feel pressurised to starve children in order to gain access to the enlarged supplementary ration; where there are large numbers of eligible children and the ration has been increased substantially, agencies will need to devote considerable resources to logistics and monitoring; targeting a large ration on families on the basis of a child's nutritional status may be unfair in terms of differentiating needs for additional food between households, e.g. child nutritional status is determined by health status and parental care as well as household food security.

3. Where there is an extreme emergency and the general ration is inadequate, SFPs may become inundated with cases, as staff are reluctant to discharge children to an inadequate ration and also many children are re-admitted following discharge. Such programmes therefore require the most streamlined design, for example, dry rations as opposed to on-site feeding, and undertaking only essential data collection, in order to be manageable in terms of agency resources.

4. Much consideration should be given to the choice of SFP foods as the type of food can improve targeting at household level and compliance with the aims of the SFP, e.g. the use of pre-mixes whereby commodities are mixed together before distribution and as a whole comprise a mixture with a taste preferred by children rather than adults. The choice of SFP commodities should also take account of the micro-nutrient balance of the general ration and the endemic micro-nutrient deficiencies that may normally occur in the area. For example, a wheat-based general ration may pre-dispose to iron deficiency, so that iron-rich supplementary foods should be considered, e.g. CSM.

Box 9

Beneficiary perceptions on targeting: Southern Zambia

A survey of beneficiaries following an emergency SFP which was implemented in conjunction with an inadequate general ration (maize only), in Choma district in southern Zambia, found that over 40% of households interviewed disagreed with the idea of targeting oil and beans on children through a SFP. This emergency SFP, which was implemented through more than 70 health centres and sub-centres in response to the 1991-2 drought, distributed a locally produced high energy protein supplement and quantities of beans and oil. The beans and oil were not targeted through the general ration as available quantities were considered too small for a general distribution. Many SFP beneficiaries admitted that the oil and beans which were distributed through health centres, were shared equally amongst all household members.

4. Programme Design

Introduction

Many aspects of emergency SFP design remain controversial and are not properly addressed by current guidelines. Furthermore, at field level it is often apparent that the programme design is inappropriate for the local circumstances, so that the overall impact is limited and predictable difficulties recur with frustrating regularity. Some of the more important aspects of programme design will be addressed in this chapter.

4.1 Dry take-home rations versus on-site feeding

The debate about which of these two types of programme design is the more effective is an age-old one which looks set to continue for many years. The relative advantages and disadvantages of each type have been set out in numerous guidelines. A consensus view is gradually emerging amongst professionals and most guidelines that dry take-home rations should be the first choice in the majority of situations and that wet on-site feeding should only really be considered when particular conditions apply.

Amongst the main reasons for opting for dry take-home rations are the following: such programmes are normally less resource-intensive for the implementing agency, the risk of transmission of communicable diseases amongst beneficiaries is less, there is less opportunity cost for mothers and carers as daily attendance is not required, the coverage of the under-twos is higher as young, and frequently sick, children do not have to be carried every day to a feeding centre, and such programmes are more easily accessible for dispersed populations. Accepted reasons for opting for wet on-site feeding include: where fuel and cooking utensils are not available for beneficiaries, e.g. in a recently displaced population; where feeding centres are easily accessible, e.g. in a small camp situation or village-based feeding; and where insecurity creates a risk for those taking home dry rations from a feeding point.

Yet, in spite of this emerging consensus, a number of recent reviews of emergency programmes still show that the majority of emergency SFPs are designed for wet on-site feeding. The reasons given by agency staff for opting for such a programme design are varied and in many instances not properly addressed by guidelines. Some of these justifications have some validity, while others are based on more questionable assumptions.

What prompts agency staff to opt for on-site feeding in preference to dry take-home rations?

Justifications which are often heard include the following:

- Wet on-site feeding guarantees consumption of the supplement by the intended target group. This rationale is underlined by the perception/fear of agency staff that dry rations will be consumed by economically active males or sold to purchase non-essentials such as alcohol.

- On-site feeding requires a smaller ration than dry take-home rations which have to be shared and consumed with other children as it would be impossible for the mother to give the food to one child only.

- MoH guidelines in some countries advocate the use of on-site feeding while in other countries or areas there is a recent history/tradition of this type of emergency programme which can be more easily and rapidly built up rather than trying to implement a new programme design.

- As on-site feeding allows more regular and intense contact between agency staff and beneficiaries there may be greater opportunities for initiatives in community development and disaster mitigation.

Box 10

Wet on-site supplementary feeding in Juba, South Sudan

In 1991 there were 38 feeding centres in Juba town which had been besieged since 1988. Twenty were located in camps for the displaced, with the remainder serving residents. The previous two years had seen a gradual deterioration in food security in and around Juba as access to alternative sources of food (e.g. not donated by the aid community) were dwindling. There were over 20,000 SFP beneficiaries in 1991, including all children under five, pregnant and lactating women and virtually all the elderly. Many of the agencies had chosen to implement wet on-site feeding programmes as a continuation of a previous wet feeding or `barrel' feeding general ration programme. This form of general ration programme had arisen because of interruptions to relief supplies in late 1988 which necessitated a form of feeding being set up which targeted only the most vulnerable in order for supplies not to run out. This tradition of wet feeding, which was accepted and expected by the beneficiary community, was therefore extended into wet on-site SFPs.

Other justifications for selecting wet on-site feeding which are rarely explicitly expressed by implementing agencies are the following:

- In situations where there are large numbers of severely malnourished children and therapeutic feeding facilities are established by agencies specialising in this type of intervention, the infrastructure for operating an on-site supplementary feeding component will largely be in place, e.g. a site/health centre, trained staff, storage facilities, logistics networks, and water supply. Furthermore, where there is an acute emergency and the number of cases of severe wasting overwhelm therapeutic feeding programme facilities, many cases will need to be switched to the SFP. In such a situation wet feeding offers far greater opportunities for the intensive monitoring that is required for such cases.

- Certain types of health care are more easily administered on a daily basis rather than with a dry weekly or fortnightly take-home ration.

- Wet on-site programmes may be perceived as providing a higher-profile activity for attracting public and donor government resources than dry take-home feeding. Host governments may also favour such a visible programme design to satisfy their own public that action is being taken.

How valid are these justifications?

Box 11

Wet on-site SFPs in Somalia

At the height of the famine in southern Somalia during 1992, one NGO operating 6 therapeutic feeding programmes and 12 SFPs in Mogadishu found that its therapeutic feeding facilities were completely overwhelmed by individuals suffering from severe malnutrition so that many cases were kept in the on-site SFP where they could be carefully monitored and given more support than would be possible in a dry take-home SFP. Take-home dry ration SFPs were not possible in many parts of Somalia at this time because of the high level of insecurity.

In addition to the advantages and disadvantages normally set out in guidelines, the above points also need to be carefully considered in decisions about which type of programme design to opt for. With the exception of the first two justifications (which we should now address), all may have some validity in particular situations (Annex 3).

The claim that on-site feeding ensures greater net supplementation of the targeted individual than dry take-home rations is by no means certain from the evidence, the reason being that although the child may receive the ration at the feeding centre, the family may consider that it serves as a substitute for the meal the child would receive at home. This is increasingly likely the more severe the food shortage at

home. This substitution effect is rarely considered by agency staff but has often been measured in SFPs in non-emergency situations.

For similar reasons, the argument that greater food rations are required in dry take-home feeding, does not hold, especially when one considers that carers will consume some of the meal in on-site feeding and that where feeds are spread over several hours, carers will need to be supplied with a ration.

The other justifications have more validity but still require careful evaluation. For example, although MoH guidelines might advocate wet on-site feeding, there should not be an unquestioning adherence to government policy by the implementing agency if the practicality of operating such a programme is in doubt or if the motive behind government policy appears to relate more to political factors than to an interest in efficiency. It may be that government/country-specific guidelines were drawn up several years ago and have therefore failed to take account of:

1. infrastructural changes within the country which would make wet on-site feeding more difficult, or
2. the many recent experiences which show up the problems of such programmes.

Similarly, arguments about on-site feeding offering better opportunities for health-care provision or developmental activities also need to be carefully evaluated. Precisely what health input is not possible through a dry take-home ration programme? It is probably true to say that vaccinations and most medications can be administered through a take-home programme and that the main limiting factor would be the professional competence of the staff.

The need to consult beneficiaries

If, after consideration of all the factors, agency staff are still inclined towards establishing a wet on-site feeding programme, it is vital that some form of rapid appraisal should be carried out whereby mothers/carers are consulted about

whether the opportunity cost of participation in on-site feeding is too great and is likely to affect their participation and what their first choice of programme design would be. In practice, such surveys are rarely undertaken, with sometimes disastrous consequences. Furthermore, it is probable that the conflicts created by a requirement for the primary carer's daily attendance at a feeding centre will be exacerbated in a food emergency where other work demands such as foraging for wild foods and fuel, petty trading and collecting water, take up an increasing amount of time (Annex 3).

Why not have dry take-home and on-site feeding in one programme?

Where uncertainty about which type of programme to implement remains, consideration might be given to a third policy option: to operate both types of programme concurrently. Some recent programmes have begun to implement systems of on-site feeding for those near a feeding point and dry rations for those further away, and the concept could be expanded so that beneficiaries have more opportunity to choose for themselves. The on-site component could then provide all the advantages specific to this type of programme (e.g. more effective treatment of certain medical conditions, close monitoring of high-risk cases, encouraging community initiatives, high-profile and fund-raising potential, and ensuring that the supplement is not sold by other family members), while those families for whom such programmes are too time-consuming could still participate through the dry take-home ration.

Given that the start-up phase of on-site feeding is often (but not always) longer, e.g. communities need to be organised, utensils obtained, etc., the dry take-home ration system could be used to begin the emergency SFP and on-site feeding could be introduced gradually, if thought necessary. This two-tier approach would not then result in any delay. Once both types of programme were in operation, simple data analysis could then be undertaken to compare efficacy, e.g. in terms of growth performance, default, length of time for recovery. In the event that one type of feeding provided significantly better results, for whatever reason (e.g. greater net supplementation, better supervision), then carers could be encouraged to switch to the `better' system (Annex 3).

4.2 Who should be included within SFPs?

As already noted in section 2.6, curative and preventive SFPs traditionally target physiologically defined vulnerable groups. In practice these have been identified as children under five years of age and pregnant and lactating women. While guidelines recognise that other target groups may need to be included in SFPs, they are identified as being of lower priority and only to be included where resources permit. These `other' target groups include the old, social cases, twins and orphans, disabled persons, and medical cases, e.g. TB cases or measles patients. At field level there would appear to be little consistency among agencies in prioritising target groups in emergency SFPs apart from giving priority to children under five years of age. In some situations agencies have been known to prioritise TB patients over pregnant and lactating women, while others have prioritised the old or malnourished children between the ages of 6 months and 14 years, and yet others have selected primary school children in preference to the needy old (see Section 2.6).

This lack of a standardised approach in assessing the relative vulnerability of `other' target groups for SFPs may reflect the fact that many agencies, e.g. UNICEF and the SCF, have historically focused their policies and resources primarily on children and also that methodologies for measuring the nutritional status of other target groups, e.g. adolescents, adults and the elderly, are poorly developed.

Given that the primary objectives of emergency SFPs are to rehabilitate mildly and moderately malnourished children in the case of curative programmes and to protect those groups most vulnerable to malnutrition and its consequences in the case of preventive programmes, there would appear to be little agreement amongst agencies (apart from prioritising under-fives) as to the priority to be assigned to `other' target groups. This undoubtedly reflects the fact that there are very few data from food emergencies which demonstrate the comparative vulnerability of different groups to lack of food. This is in part because relief agencies rarely have time for research in emergencies and also because even in camp situations, accurate mortality and morbidity data are very difficult to obtain, for a variety of

reasons, e.g. mobility of the population, reluctance to disclose information, logistical constraints, and imprecise population data, so that gross under- and over-estimates can easily occur.

What evidence *do* we have for identifying who is most vulnerable to lack of food?

The majority of reliable mortality data are derived from camp situations. These are not representative of the types of conditions frequently found in other situations of food insecurity in terms of disease patterns, availability of water and sanitation, and demands upon adults and child carers. Certain conclusions can, however, be drawn about vulnerability to famine/food emergencies from the available data.

1. Absolute death rates tend to be highest amongst infants under 12 months, while relative increases during emergencies are highest in children aged between 1 and 12.

2. Risk of mortality amongst malnourished under-fives increases significantly in the 75-85% weight-for-height range.

3. In famine situations children aged between 6 and 29 months show significantly higher prevalence of malnutrition than those between 30 and 60 months.

Box 12

Child and Adult Mortality Rates in Somalia

In Baidoa in Somalia during 1992 most deaths recorded were child deaths. However, by September the numbers of deaths amongst children and adults were almost equal and by October and throughout November far more adults than children were dying. This high death rate amongst adults partly reflected the fact that many children had already died and also that feeding centres for children were operating effectively while feeding kitchens for adults were frequently being closed down because of looting.

4. There are very limited data on the association between malnutrition (usually based upon BMI measurements) in adults/adolescents and the risk of mortality, and most available data apply to non-emergency situations. They do show, however, that risk of morbidity and mortality associated with different BMIs varies with location and body-type of the population. They also show reduced work capacity in adults with low BMI.

5. Less rigorously collected data have shown very high rates of mortality amongst the old in certain types of famine situation, e.g. Red Sea Hills in Sudan during the 1984 famine, and amongst adults generally.

So what can we say about vulnerability?

Based on what is known, we can make the following points about vulnerability and target group selection for emergency SFPs.

! There are insufficient data to allow comparison of vulnerability to malnutrition in terms of mortality amongst the `non-priority' target groups. Inclusion in programmes therefore appears to have been based up to now on intuitive understanding of relative vulnerability often based on local knowledge and the size of potential target population groups in relation to the availability of resources.

- Malnourished individuals over the age of five are undoubtedly at increased risk of illness and death, although the ranges of malnutrition which place such individuals at risk probably vary with population and environment and have not been clearly defined by research. Consequently, there can be no reason for prioritising a malnourished child under-five for supplementary feeding over an equivalently at-risk malnourished individual over the age of five.

- There are no data from food emergencies in non-refugee situations which show a greater increase in infant or maternal mortality than, for example, amongst the old or TB sufferers. If the underlying assumption in prioritising pregnant/lactating mothers is that there are greater physiologically determined nutritional needs during pregnancy and lactation which determine a need for supplementation, then the question must be asked as to whether this need is any greater than for a TB patient with elevated nutritional requirements, or for the elderly who find it harder to get access to scarce basic rations or to employ other coping strategies that the more physically able can implement.

- Given the evidence of reduced work capacity in malnourished adults a question must be raised about the efficiency of a programme which targets supplements on the less productive members of households. Clearly, in many food emergencies (particularly non-refugee situations), the work needs of adults increase as fuel, livestock grazing and water must be found further and further away, as wild foods must be foraged for, and as petty trading and other increasingly cost-inefficient (limited returns on labour) income-earning opportunities are sought. If dependents are to be protected then these work activities must be safeguarded. A slightly longer-term view of emergency SFPs might then be that the nutrition and health status of young children is best protected by allowing the household to determine its own intra-household food distribution even if this favours the economically productive adult.

The need for greater flexibility in identifying who should receive the supplementary food

The implications of much of the above discussion points to a need to be very flexible in identifying target groups for SFPs and to consider a wide variety of factors before making final choices, particularly in relation to `other target' groups, i.e. individuals over the age of five (Annex 4).

The sorts of factor to consider may include the following:

- in certain situations adults may be equally or more likely to develop life-threatening malnutrition, e.g. where high levels of insecurity exist and adult foods are more lootable than foods for children, or where an area has been under siege for a long time and many children from the most vulnerable families have already died;

- where the general ration is lacking in certain micro-nutrients which predispose particular groups to greater vulnerability of deficiency, e.g. scurvy and pellagra mostly affect older age groups while anaemia affects mainly children and pregnant and lactating women, the choice of target group should be modified accordingly;

- disease environments should also affect targeting decisions, e.g. where TB is prevalent (often in camp situations) or in areas of malaria endemicity to which people from a non-malaria-endemic area have moved, or where there is an epidemic of shigella. The decision should be influenced not only by the need to supplement the food of particular target groups (whose nutritional status is compromised by disease), but also by the need to provide basic medical care, which may be most easily administered through a SFP. This last point is not advocating that complex diseases such as shigella or bronchopneumonia should be treated as a matter of course at supplementary feeding centres, but that, where existing health facilities are weak or absent, e.g. because of insecurity, newly established feeding centres

can offer an infrastructure through which an array of medical inputs can, if necessary, be provided;

- infrastructure and agency resources may also affect the decision about which group to target. For example, where it is not possible to monitor weight gain during pregnancy and resources are not available to target all women in the last trimester of pregnancy, other smaller target groups may need to be identified;

- where the work demands of adults have increased enormously (this is particularly likely to apply to women) and are crucial to the survival of households, it may be that programmes should be more lenient towards the sharing of supplementary foods with adults.

4.3 Where should feeding centres for non-camp populations be located?

A key issue to consider when planning an emergency SFP for non-displaced populations is whether to operate through existing clinics/health centres at village level or at some intermediate level, e.g. through a feeding centre which serves a large number of villages in the catchment area. It seems obvious that such decisions should largely be based upon the available agency resources, as the village-based programmes are likely to be very resource-intensive for the implementing agency in the early stages, e.g. the need to train village-level staff and to set up complex logistical and monitoring networks. Similarly, programmes which operate through a large number of health centres over a wide geographic area or even within a relatively small urban area with a high population density, can also be expected to pose major logistical and managerial difficulties for implementing agencies. Yet, agencies consistently appear not to anticipate the types of difficulty that can arise as a result of choice of infrastructure, and also fail to capitalise fully on the types of advantage that particular types of infrastructure can offer.

Although village-based programmes can be very problematic (see Chapter 6), there may be a number of justifications for operating a village-based SFP which must be

considered alongside these potential problems. The following justifications might apply:

- if the geographic spread of the food emergency is highly village-specific so that there is a need to target only those villages that are in serious need, partly in order to conserve scarce resources and also so as not to over-supply food and consequently produce disincentives to work

- to strengthen community-based initiatives and to build into the feeding programme other community-based activities, e.g. nutrition education, agricultural extension, etc.

- to reduce the requirements for management and supervision by the implementing agency, as communities assume responsibility for food preparation, storage, identification of beneficiaries, etc.

- to encourage the empowering process of project formulation at community level, which may be considered to be an end in itself.

The alternative of operating through the existing health infrastructure may be preferred for other reasons:

- to capitalise on the existing infrastructure and the MoH staff already in place. Also, health centres tend to be located where population density is greatest

- village-based targeting systems may be too resource-intensive for an agency, in terms of data collection and analysis

- to be better able to provide the medical inputs associated with emergency SFPs, e.g. vitamin A prophylaxis, and to respond to drought-related medical problems

- growth monitoring can take place more easily at health centre level than at village level

- the programme can be re-integrated into normal MCH activities when it closes

- insecurity may preclude a village-based intervention.

However, the potential disadvantages of a health centre-based intervention must also be anticipated. These include:

- coverage will be less than in a village-based programme (assuming all needy villages in a given area are included), as distances will be far greater for many potential beneficiaries and may prove very difficult where young or sick children need to be carried

- the follow-up of defaulters will be difficult

- the extra work demands on MoH staff may reduce the effectiveness of health care and create tensions between the relief agency and government health staff

- existing feeding programme practices, where operated through MCH programmes, may have to be adhered to, e.g. utilising weight-for-age as opposed to weight-for-height measurements

Experience has shown us that very often the above advantages and disadvantages of utilising different infrastructures are not properly considered prior to making a decision, so that problems occur with frustrating regularity and potential advantages are not properly exploited.

4.4 Agencies operating general ration programmes in conjunction with SFPs

Agencies may find themselves in the position of having to decide whether to take the responsibility for implementing general ration programmes in conjunction with supplementary and therapeutic feeding programmes. Experience has shown that the operational demands of implementing both types of programmes may reduce the chances of either being implemented successfully. Pressure to establish the general ration first of all can lead to long delays in setting up the SFP, as distribution and logistical systems have to be devised, storage and warehousing set up, and careful monitoring established. Agencies may also discover that implementing an effective general ration programme can create problems for the subsequent SFP; transporters are reluctant to move relatively small quantities of food, or communities used to a food-for-all general ration resist a targeted SFP. Once again, much forethought must be given before an agency takes on both programme responsibilities.

Box 13

Anticipating the implications of using established infrastructures: Zambia 1992

A NGO implementing an emergency SFP through established health centres in southern Zambia during the response to the 1991\2 drought, encountered numerous difficulties that could have been better anticipated. As the existing practice of weight-for-age monitoring in the MCH programme was adhered to, all children under 80% wt-for-age were admitted to the SFP. This meant that some of those over two years of age would not really have benefited from supplementary feeding as they were stunted but no longer malnourished. Furthermore, the extra work demands on the existing medical staff, of allocating and accounting for food, were said to have detracted from their ability to administer medical care.

4.5 Numbers per feeding centre/staffing numbers

Experience shows that problems can arise where staff: beneficiary ratios are low and feeding centres are overcrowded. There can be a number of reasons for this. There may simply be a lack of available local staff with adequate training, or lack

of space sometimes caused by administrative/political difficulties in opening up new centres. There may also be a lack of international agency staff to supervise and train because of poor security in an area so that numbers have to be kept to a minimum in the event of a sudden need to evacuate personnel.
Lack of staff will lead to poor supervision of feeding and follow-up of defaulters and poor evaluation procedures, while overcrowding will lead to increased cross-infection and discomfort. Both ultimately lead to poor programme performance and consequent disillusionment amongst carers that the beneficiaries are not progressing sufficiently quickly, as well as low morale amongst staff.

Box 14

Staff/Beneficiary Ratios:
Examples from Madagascar and Sudan

During 1992 a NGO operating an emergency SFP in Tulear province in southern Madagascar in response to two years of drought, found widely different weight improvement rates among feeding centres. On review the worst performing of the six feeding centres were those with the lowest staff: beneficiary ratio. Another NGO operating an emergency SFP during 1989 in camps around Kosti town in South White Nile Province, Sudan, for displaced Southerners and drought migrants from the area, found that overcrowding at feeding centres was affecting supervision capacity and overall programme effectiveness. Their solution was to change the eligibility criteria so that only those children under 75% weight-for-height were admitted for feeding. This rapidly reduced the numbers to more manageable proportions.

Target levels should be set for staff:beneficiary ratios, as should numbers per centre for on-site feeding. Comparison of performance between centres can indicate whether there are insufficient staff. Where these targets are not being met other alternatives might be considered, such as switching to dry take-home rations or focusing on the more severely malnourished (e.g. less than 75% weight-for-height) or finding new sites.

Target levels for beneficiaries per centre suggested in the guidelines vary between 250 and 500. However, in some acute emergencies it will be impossible to limit

numbers. Optimum staff:beneficiary ratios are hard to define, as they will vary with programme design, e.g. numbers of feeds, and the skill levels within beneficiary populations.

However, at least three categories of staff are necessary:

- an **expatriate or national doctor/senior nurse/nutritionist** to supervise, train and monitor the programme,
- **feeding-centre staff** to cook, supervise food distributions, guard stores and the compound, and help with water supplies and fuel, and
- **health workers** to assist in centres, locate malnourished children, follow up defaulters, assist with referral to health services and help with surveys.

In addition, a food logistician may be required for large SFPs.

Knowing one's own capacity and when additional support is necessary

Many recent emergency SFP programmes have suffered from staffing problems. These have included:

- inexperienced international field staff with limited technical supervision from headquarters level

- poorly trained local staff adversely affecting registration, growth monitoring and discharge practice

- lack of staff with clear sectoral responsibilities, so that specialists have had to take on responsibilities which interfered with their own specialist sphere of operations, e.g. nurses and nutritionists having to assume responsibility for logistical planning, or lack of personnel with responsibility for data handling, so that training of local staff in data collection and use is poor with the result that monitoring and evaluation suffer.

The lessons from these experiences should be that staffing requirements need to be carefully anticipated at the programme-design stage, and where staffing is likely to be a constraint then programme modifications should be considered. Many NGOs and UN agencies face enormous problems in recruiting suitably qualified and experienced expatriate staff. Where this applies, a strong element of realism needs to be injected into considerations about what programme designs are feasible, given certain staffing constraints, at the start of the planning stage.

4.6 Health components of SFPs

As stated in Chapter 2, guidelines on emergency supplementary feeding advocate certain basic health-care provision as an integral part of programme design, e.g. provision of medication for de-worming and malaria prophylaxis, etc. However, experience shows that in practice basic health-care provision is often inadequate. This reflects a number of factors:

1. absence of health infrastructure and trained personnel at feeding centre level to administer health care, and

2. the scale of the emergency and the lack of agency resources make it very difficult to provide medical care to a large population with a high incidence of disease.

Box 15

Lack of guidelines as a potential impediment on programmes: a Zimbabwe example

In Zimbabwe an agency implementing a village-based emergency SFP in over 1,600 village feeding points as a result of the 1991/92 drought was delayed by many months in administering vitamin A prophylaxis as part of the SFP. This was because MoH guidelines on allocation procedures had not been finalised. Due to the potentially toxic effects of overdosing with vitamin A, particularly for pregnant women, it is vital that appropriate guidelines are carefully followed and that programmes are monitored regularly.

More specifically, agency failure to offer adequate medical care often results from:

- lack of drugs and poor staff training in drug allocation

- limited screening by suitably qualified staff for medical conditions requiring treatment, and a lack of agency policy on when to screen for underlying medical problems or when to refer children to medical centres if they are not gaining weight

- lack of MoH and agency guidelines on certain medical treatments and failure to use existing generic guidelines

What lessons can we learn from these experiences?

These repeated experiences suggest that certain lessons need to be learnt and reinforced at field level if future programmes are to be more successful in providing complementary medical care. The following points need to be considered:

- In order to have any substantial impact upon nutritional status, SFPs for malnourished children must offer a minimum of health care. SFPs without complementary health inputs cannot constitute an efficient use of resources.

- The choice of infrastructure and associated staff, e.g. health centre or village based, will determine the type of health inputs that can easily be provided. For example, measles vaccination cannot, in most cases, be implemented through village-level community health workers. Furthermore, drug use and treatments by feeding-centre staff need to be regularly evaluated.

  It could be argued that the capacity to implement complementary medical activities should be taken into account in the choice of infrastructure and design of a feeding programme, e.g. on-site versus dry take-home. For example, on-site feeding provides a better opportunity to administer iron-folate medication than a dry weekly take-home programme, while operating

through existing clinics will facilitate the coverage of measles vaccination or vitamin A prophylaxis. Thus, the extent and type of health problems in an area need to be investigated in advance of setting up an emergency SFP. This may require some form of epidemiological analysis based upon rapid appraisal techniques, the results of which could be used to influence the choice of infrastructure and design.

Box 16

Drug use and treatment by feeding centre staff

An agency operating in Mogadishu, Somalia during the 1992 emergency reported that local staff working in the SFP centres were often using several drugs where one would have sufficed, and that many drug treatments were not completed, with local staff suspending medication as soon as the symptoms were alleviated. The agency recommended instituting proper drug-usage evaluation procedures.

! Agencies implementing emergency SFPs need to gear up for essential drug supplies which must be viewed as being just as important as the provision of food. Furthermore, in drought situations certain conditions will become more prevalent, e.g. dysentery and scabies, so that pre-planning for necessary drug supplies needs to take place. Also, where feeding programmes are operated through the existing health infrastructure, the likely increased attendance should be capitalised on and complementary health interventions planned accordingly. Such programmes offer the ideal opportunity to boost vaccination coverage and increased supplies of vaccines should be planned with the necessary authorities and agencies, e.g. MoH/Unicef.

! Where existing health infrastructures are used for emergency SFPs the extra workload of operating the feeding programme and collecting the appropriate data may detract from the health care provided by local staff. The situation

should be regularly reviewed and, if necessary, some form of counterpart provided to safeguard against this.

! Agencies which lack field-level and institutional capacity to provide basic complementary medical care must link up in advance of programme implementation with agencies that can provide this.

5. Monitoring and Evaluation

Introduction

It is very easy to become completely embroiled in implementing an emergency SFP, while losing sight of how effective the programme is in meeting its objectives. The operational demands of running this type of programme can be enormous with endless practical problems to overcome, so that data collection can easily become relegated to a task which is undertaken when and if time and resources permit. Yet, without adequate monitoring and evaluation, it is quite possible for poor design and practice to be overlooked and for highly inefficient and ineffective programmes to continue unnoticed. It is also not uncommon for agencies to set up data collection systems but then pay little attention to analysis and interpretation of the results.

5.1 `Core' indicators for programme evaluation

The core set of indicators which most guidelines recommend should be collected are attendance/default rate, recovery rate, mortality rate, improvement rate, mean length of stay and coverage of eligible population (Chapter 2).

Poor attendance/high default rates can reflect several types of problem. Perhaps the most common is the difficulty carers have in attending the feeding programme. Thus, in some situations mothers may find it difficult to attend every day for on-site feeding, where this conflicts with other work demands either within or outside the family. Although such conflicts are worse for daily on-site feeding they can also arise in weekly dry take-home distributions, particularly where the distribution takes an entire day and may clash with another important activity such as the collection of a family general ration.

Another cause of poor attendance/high default may be the mobility of the population, particularly in the early stages of the emergency. Many families may use the location/town where the feeding centre is located as a transit point to

recover from the journey. Where the population is in flux default will inevitably be high.

Other possible reasons for poor attendance/high default rates include high rates of illness so that children are kept away until they have recovered (this may reflect both the difficulty of carrying sick children to a feeding centre and in some cases a preference for traditional healers), dislike of the food supplement, and dissatisfaction with the rate of recovery of the child largely because of an inefficient and poorly planned feeding programme. Insecurity, resulting in restrictions on people's movements, is also an increasingly prevalent factor that adversely affects attendance.

Box 17

Attendance/default rates in Angola and Malawi

One NGO working in the besieged towns of Huambo and Bie in Angola operated emergency SFPs through a small number of health centres during 1990-91. Shortage of CSM in late 1990 led to the necessity of replacing this with rice milk, which in turn led almost immediately to a very large drop in attendance. Another NGO operating an emergency SFP in the refugee impacted area of Dedza in Malawi in 1989-90 found that in the early stages of the programme attendance was very poor (less than 30% in some centres). A follow-up survey of defaulters established that one reason for the high level of default was that mothers were dissatisfied with the children's slow rate of recovery which the agency acknowledged was due in part to a poorly planned and supervised feeding programme.

Recovery rate, improvement rate, mean length of stay and mortality rate all indicate how effective the programme is in supplementing the general ration, treating basic medical conditions, and restoring weight in previously malnourished children. The first three of these indicators can be interpreted on the premise that a moderately malnourished child should gain between 5 and 10gms/kg/day and that at this growth rate the discharge target of 85% weight-for-height should be reached after one to one and a half months, with discharge after two to two and a half

months. Targets for these sets of indicators are currently specified in only one set of currently available guidelines[8]. Targets given are for a recovery rate of more than 70%, a mortality rate of less than 3%, more than 75% of children showing improvement and a mean length of stay of less than 60 days. Failure of programmes to achieve these targets could reflect many problems, such as inadequate general food rations, unequal distribution of food within the family, illness, inadequate medical follow-up, and poor organisation and supervision of the feeding programme, e.g. the ration is too small or the recipe is incorrect.

The coverage rate is important as indicating whether most of the individuals that need to be reached by the programme are being reached. The usual method of attempting to calculate coverage is to conduct a nutritional survey or to utilise the findings of a recent one, and then, based on the prevalence of malnutrition and estimates of the numbers of the target population, e.g. usually the under-fives, to determine what percentage of malnourished children in the target population are enrolled in the SFP. There can be a number of difficulties with calculating coverage. In some situations it may be impossible to conduct a survey, e.g. because of insecurity, or agency resources relegate this to a low priority. Also, population data may be very unreliable, especially where there have been large population movements as a result of the emergency. Another problem may be that some of those enrolled in the SFP and recorded as under 80% weight-for-height may be above five years of age or above 80% weight-for-height in between weighings. One way around this problem may be to calculate the coverage based on the percentage of malnourished children found in the nutrition survey who are enrolled in the SFP. The one guideline which advocates target levels for coverage suggests that 50% coverage in rural populations and 75% in urban/camp populations indicate adequate coverage. In practice, the coverage levels achieved by emergency SFPs have been shown to vary enormously, reflecting many factors such as the presence of Community Health Workers who could encourage participation through outreach, the infrastructure and the distances needed to travel to the centre, the size of the supplement and adequacy of the general ration.

[8] MSF (1995) *Nutrition Guidelines*. Coordinated by M Boerlart, A Davis, B Lelin, M J Michelet, K Ritmeijer, S van der Kam and F Vautier.

5.2 Other indicators that might be monitored

There are many other potentially useful indicators that could be monitored and which the guidelines do not consider. There are also situations in which the types of data available from programmes are not entirely appropriate to inform design and implementation decisions, but can still be utilised in conjunction with other data to increase confidence in decisions. While recognising that data collection should be secondary to programme implementation, especially where lives are at immediate risk, there are still many instances in which additional or better use of information can improve programme performance and therefore ultimately save more lives.

! Re-admission rates can give a great deal of information about the adequacy of the general ration to which SFP beneficiaries are being discharged. While some level of re-admission is to be expected because of poor feeding practices at home or recurrence of disease, high rates might indicate poor general rations and call into question the whole efficacy of the SFP. Very few agencies actually encourage the collection of these data which may in part reflect the difficulty of collecting accurate data as mothers are reluctant to admit that their children have been on the programme before, or the registration system may not make it easy for feeding centre staff to spot re-admissions.

! Cross infection rates can indicate whether feeding centres are too overcrowded and whether the value of the SFP is being negated by high rates of illness. Clearly, measuring rates of cross-infection can never be rigorous, as children may be incubating the disease before enrolment or may contract the infection outside the programme. Nonetheless, with experience it should become possible to determine whether the feeding programme is contributing significantly to high rates of infection and whether some remedial action is required, e.g. opening up new sites to reduce overcrowding or isolating particularly contagious conditions.

Box 18

Reducing cross-infection in Somalia

One agency working in Baidoa in Somalia during 1992 attempted to do this in overcrowded therapeutic feeding centres. During the height of the emergency space was at a premium, as admissions to the TF centres were in excess of 15-20 per day and insecurity and lack of staff prevented opening up new centres. In order to reduce cross-infection, the implementing NGO isolated cases of dysentery and pertussis from other beneficiaries. However, they could not isolate cases of acute respiratory infection as the prevalence was so high. A subsequent evaluation concluded that, although rates of cross-infection could not be accurately recorded, the practice of isolating infectious patients led to a reduction in cross-infection by at least 50%.

! The age distribution of attenders can indicate whether certain groups are being under-served by the programme. The literature on SFPs in non-emergency situations suggests that this happens to children between the ages of 6 and 24 months and may reflect the difficulty of transporting young children long-distances to feeding centres and the greater morbidity rates amongst this age group. As this age group tends to have the highest rates of wasting in famine situations, it is important to determine whether such programme bias is occurring and whether this is due to logistical and health factors, which in turn suggest a need to rethink programme design and infrastructure. Data on weight improvement rates and mean length of stay should also be broken down by age, as this can indicate whether a particular age group is not performing well on the programme. Even within the under-five population expectations of weight gain vary enormously. Thus, the expected weekly weight gain for children under six months is 180 gms, while for children over two years it is only 40 gms per week.

Box 19

Monitoring as a tool for fine-tuning programme design: an example from Iraq

A medical agency working in southern Iraq began a SFP through five existing health centres for the displaced and returnee population in September 1991. Although need for the programme was not obvious from nutritional surveys, the continued economic decline in the country was seen to be creating serious hardship for many families. An analysis of the weight data at the feeding centres found that overall results were good, except for those under six months of age. This was attributed to the fact that the decline in the economic fortunes of families had led to a decreased ability to purchase milk powder and that many mothers did not know how to cope without formula milk. The agency concluded that children under six months would not really benefit from the SFP, and that the optimal policy for this age group was to support maternal breast feeding by providing a ration to lactating women attending the feeding centre and encouraging exclusive breast feeding.

! The number of children per centre is a variable that is easy to monitor and can indicate risk of cross-infection and supervisory capacity if space and numbers of staff are also included in the equation. Several guidelines advocate that there should be less than 250 beneficiaries in an on-site feeding programme and between 150 and 200 per day in a dry take-home programme. In practice, these limits are often exceeded.

! Increased physical activity and morbidity reduction may be very real results of emergency supplementary feeding. Yet such variables are almost impossible to quantify, especially in emergencies. However, when one considers that up to two-thirds of the supplement may be utilised for increased physical activity and improved immuno-competence rather than conversion to body tissue, then it is clear that at least some qualitative assessment of changes in physical activity and morbidity patterns and recovery may give an indication of the utility of the SFP.

- Whether operated through existing health structures or newly established infrastructure, most SFPs attempt to provide some form of medical provision in conjunction with the feeding programme. Indeed, as noted in Chapter 4, unless a minimum of health inputs is provided these types of feeding programme may become grossly ineffective. Clearly, the opportunity for health inputs increases considerably when specialised staff are available to administer care, e.g. where existing health centres are used as the site for the feeding programme. A justification for operating an SFP based on a clinic or rural health centre may be that it also provides the opportunity for improving immunisation coverage and responding to drought-induced medical problems, e.g. scabies and dysentery. Where these objectives are set, data on their fulfilment should be collated and evaluated.

- Agencies rarely attempt to measure the cost-effectiveness of emergency SFPs, so that it is not possible to compare the output or outcome with other possible interventions. Without this, there is the risk that programmes which are very expensive will continue to be implemented without efforts to re-design the intervention. Furthermore, increasing experience of assessing cost-effectiveness may make it easier to determine which type of programme to operate in advance of the intervention. While it is very difficult to measure cost and effectiveness precisely as so many `immeasurable' variables need to be taken into account, e.g. opportunity cost to the carer and the non-anthropometric outcome, data on some indicators can be relatively easily collated, e.g. the financial cost of the programme, the number of expatriate staff and vehicles, the number of calories distributed, the number of children who have recovered.

5.3 Some general principles on data collection

A number of general points need to be made about the role of data in monitoring and evaluating emergency SFPs.

1. As we have said, only one guideline currently sets target levels for indicators (six core indicators). This may partly explain why so many agencies routinely collect data on this core set of indicators but fail to interpret the results in field-level reports. Ideally, these data should be used to compare the efficacy of different feeding centres in the same programme and also to evaluate the overall effectiveness of the whole programme. However, it is also clear that target levels must take account of the different contexts of emergencies. For example, where general rations are poor, improvement and recovery rates are bound to be adversely affected, while for dispersed rural communities default rates are likely to be higher than for camp populations. Target levels therefore need to be flexible. There also needs to be a review of data from different emergencies to ascertain what are achievable and acceptable targets for specific indicators in different programmes based on `successful' and `unsuccessful' programmes.

2. The importance of collecting data for evaluation will vary with the situation. For example, where the general ration is obviously inadequate but SFPs are nonetheless implemented, it is more important for the SFP to be evaluated to determine whether there is any nutritional impact on the intended target group. If not, and other components of the SFP, e.g. health inputs, are negligible, then it may be more cost-effective to distribute the supplementary foods through the general ration, even if there are only small quantities of supplementary food available. Thus, where general rations are inadequate, extra resources may need to be expended in data collection and analysis for the purposes of evaluation. Furthermore, in situations of general ration inadequacy monitoring re-admission rates becomes increasingly important.

   In contrast, in the most acute phase of an emergency where agency resources may be overstretched, it may be necessary to limit data collection/evaluation and prioritise those aspects of the evaluation which are most vital to the programme. Thus, monitoring of attendance/default and coverage might be postponed until proper growth monitoring has been established. Certain types of data collection and analysis may only need to be carried out

periodically, e.g. calculations of average weight gain at the feeding centre could be carried out retrospectively on a sub-sample every three months.

3. In view of the conflict that often arises between data collection and the need to implement the programme, it may be that in some situations a separate individual is needed to assume responsibility for the collection of information. The type of professional background for such a person would be nutritional/epidemiological. A key component of the job description for such an individual would be not to add to the already onerous workload of staff implementing the SFP. Such an individual could be responsible for training local staff in appropriate data collection, collation and analytical techniques, prioritising data collection, carrying out periodic surveys, constantly reviewing and analysing data and recommending programme modifications where appropriate, and conducting research. Where the main intervention of the agency is supplementary feeding, then arguments for employing a separate data person are reinforced.

6. Typical Scenarios

Introduction

This section presents seven scenarios which are broadly representative of the majority of emergency SFP situations faced by relief personnel. A number of practical issues which are specific (although not exclusively) to each scenario are then highlighted. The scenarios come under three broad headings: camp populations, rural populations and urban populations. Cutting across these three contexts is conflict, which can have profound impacts on programme design and implementation. Ways in which programmes can be affected by, and modified to take account of, conflict situations are discussed for each of three broad headings.

The principal benefit of such an approach is that information can be conveyed in a way which is more accessible to non-specialists than would be possible using a more generalised approach. However, there are drawbacks. First, a few typical scenarios cannot cover all possible types of situation likely to be faced by field staff. Second, scenarios which are typical are not necessarily mutually exclusive. However, it is hoped that readers may be able to find information relevant to their own circumstances which will help them to participate in discussions on the design and implementation of emergency SFPs.

6.1 Refugee camps: early stages of displacement

Box 20

Examples of rapid deterioration in the nutritional status of recently arrived refugee populations: Bangladesh and Ethiopia

There are numerous examples of refugee populations arriving in a relatively good nutritional state but within a short period of time experiencing near-famine conditions. Recent well-documented examples can be found in Cox's Bazaar in Bangladesh where between the end of 1991 and June 1992 approximately 250,000 refugees from Mynamar and Rhakine state in India arrived. The population was distributed between 15 camps in Cox's Bazaar District which is a disaster-prone area with regular flooding and occasional cyclones. Within a short period of time (six months), the population was experiencing a nutritional and health crisis due in part to an inadequate international food aid response and also to poor sanitary conditions in the camps. By June 1992 levels of malnutrition in excess of 25% were seen in several camps with high levels of vitamin A and vitamin B2 deficiency.

Another well documented example of a population arriving in relatively good condition but deteriorating rapidly was seen in Hartisheik refugee camp in South-East Ethiopia in 1989. Here over 100,000 Somali refugees from a relatively affluent section of northern Somali society experienced levels of malnutrition in excess of 30% after several months in the camps. Average malnutrition rates on arrival were only 8%.

The early stages of a refugee or internal displacement crisis, when large numbers of refugees or internally displaced people arrive at a camp location seeking assistance, are usually the most difficult for the aid agency community. Often, but not always, such migrants arrive in a weakened state and the scale of the problem completely overwhelms international resources. The situation for these individuals often deteriorates before it improves. In the initial stages of this type of emergency, adequate general rations may not be established for several weeks. Furthermore, camps may be overcrowded, with poor sanitation facilities, limited availability of water, absence of health-care infrastructure and shortage of drugs. In such a situation quick decisions may need to be taken about operating an emergency SFP which does not conform to many aspects of current guidelines.

Thus, a large-scale preventive SFP may be advisable, if resources allow, to include all children under the age of five. The early establishment of a SFP in the absence of adequate general rations may also be justifiable on the grounds that data on numbers admitted to the programme, re-admissions and the performance of those on the programme can be used to press for more urgent provision of an adequate general ration (Annex 2).

Programmes may also need to be established where there are severe water and sanitation difficulties, even though overall food availability is adequate. The effects of poor sanitation, rather than lack of food, on nutritional status in the early stages of a refugee emergency have recently been witnessed in Tanzania and Zaire, where Rwandan refugees have experienced appallingly high rates of cholera and dysentery leading to high levels of malnutrition and mortality. Some estimates are that the peak mortality rate caused by the epidemic in Zaire was between 100 and 180 times the normal, which is the highest ever recorded in the early stages of a refugee crisis.

Normal types of data collection for monitoring and evaluation may in some cases have to be waived due to lack of weighing equipment and trained staff. Data collection can be introduced gradually by prioritising the information which is most critical: for example, weighing and monitoring severely malnourished individuals in therapeutic feeding and subsequently those in the SFP, but compiling data on attendance and coverage only at a later stage.

In some situations it may also be most appropriate to opt initially for an on-site feeding programme. For example, where measles immunisation rates are low or there is a significant (epidemic) level of disease caused by poor sanitation or the threat of epidemic, and there is little primary health-care infrastructure in the camp and therefore no outreach, on-site SFPs may provide the best available opportunity to tackle health problems or risks rapidly. Clearly, in such circumstances those with conditions such as measles would have to be isolated in special `measles units' and away from children attending the SFP who had not contracted the disease. Also, in situations where there are large numbers of severely malnourished individuals but not sufficient facilities for adequate therapeutic feeding, on-site programmes

can provide a `reservoir' for the severely malnourished which allows such cases to be more closely monitored. However, these advantages have to be carefully weighed against the increased risk of cross-infection in on-site programmes, which in turn will be determined by the degree of crowding at feeding centres, hygienic practices and levels of aeration (Annex 3).

In the early stages of an acute refugee or internal displacement camp emergency the definition of the target group may also need to be expanded to include others apart from children under five and pregnant and lactating women. In a situation where the population has been on the move for a long period during which they have received little assistance, or the population is fleeing a long-term environment of poor food security due to drought or conflict, then many different groups may be malnourished. The old and infirm are particularly vulnerable in transit, although adolescents and adults may also comprise a predominant group of malnourished individuals particularly where there has already been high mortality amongst young children and the old.

Epidemics may also dictate the choice of target groups. Outbreaks of diseases such as shigella (a form of dysentery), which fares particularly well in overcrowded and poorly planned camps, can rapidly cause malnutrition in all affected age groups but particularly the young and the old. Mortality rates can rise quickly as opportunistic infections attack those with compromised immunity because of malnutrition. Some agencies have recently established emergency SFPs for all individuals suffering from shigella (Annex 4).

6.2 Refugee camps: stabilised populations

A situation may be said to have stabilised once the main refugee influx has taken place and the acute stage of the emergency has passed so that a minimum of basic services are being provided concomitant with low levels of malnutrition, morbidity and mortality. The World Food Programme and UNHCR distinguish between acute refugee emergencies of less than one year and protracted emergencies of more than one year. Stabilised or well-established refugee camps probably represent the most straightforward scenario for setting up an emergency SFP. Indeed guidelines on

emergency SFPs tend to have been written with the well-established refugee camp situation in mind. A well-organised camp will be set out in discrete sectors with an established primary health-care infrastructure administered from health centres and by CHWs from the refugee population. Registration of all households will ensure that population numbers in each sector of the camp are known and general rations provided by the international aid community will be adequate for the number of refugees. In such a situation much of the practice advocated in existing guidelines on emergency SFPs is realisable. In particular, the relatively small distances involved in traversing the camp and the near-accurate census information will allow regular nutritional surveys to be easily carried out, which can be used to assess the need for an emergency SFP, e.g. if malnutrition levels rise above a trigger level and other data on food security indicate the need for an emergency SFP. The nutritional survey results can also be used for screening mildly and moderately malnourished children for the SFP as well as to estimate coverage of the programme. The adequacy of the general ration can also be relatively easily assessed (compared with a rural emergency affecting a resident population) to determine whether the SFP is really providing a supplement rather than acting as a partial replacement of the general ration. Furthermore, the CHWs can provide an outreach for locating possible SFP beneficiaries and can follow up recent discharges and defaulters.

Box 21

Over-registration and implications for ration entitlements

In Hartisheik refugee camp it was estimated that the number of ration cards held by the camp population exceeded the numbers of refugees by 3:1. As a result donors started to reduce pledges of food, so that ownership of one ration card eventually entitled the owner to a ration of less than 1,000 kcals, which is less than 50% of per capita energy needs. This compares unfavourably with the per capita rations of 1,600 kcals allocated in German concentration camps such as Auschwitz during World War II.

However, another typical scenario for an established refugee camp is where a poor registration system has become institutionalised so that the number of registered refugees is greater than the actual number. Typically, after the failure of efforts to install a better registration system and to re-register the population, donors may adopt a second option of reducing their food aid pledges on the basis that too much food is being allocated to the population. While many refugees with excess ration cards are able to cope with the reduction in general rations, those with the legitimate numbers of cards may start to experience hardship. This scenario is all too common and has led to situations where the entitlement gained by possession of a single ration card becomes reduced to less than half a full ration. This tends to penalise the most vulnerable groups in refugee populations, who may include new arrivals who have not had an opportunity to obtain extra ration cards and have not become assimilated into local economic networks, and those other groups least able to enter into the ration card `parallel economy'. These may include politically weak ethnic groups or households with high dependency ratios. In such situations it may become apparent that the majority of malnourished children presenting at feeding centres belong to a certain type of family with compromised food security. Arguments for increasing the size of the emergency supplementary ration in this type of situation may then be reinforced. The SFP ration then becomes a form of partial family ration which is accepted by the entire refugee community because it is targeted on apparently scientific criteria, i.e. on those families with malnourished children.

In this type of situation it is also more likely that micro-nutrient-deficiency diseases will be seen among certain vulnerable sections of the population. Where this is likely to occur or has already done so, particular attention will need to be given to the micro-nutrient content of the supplementary ration and also to the selection of appropriate target groups for the SFP. Although micro-nutrient deficiency should ideally be addressed by means of improving the general ration, this is often not within the sphere of influence of agencies responsible for supplementary and therapeutic feeding programmes. Thus, where, for example, scurvy or pellagra is threatened or is already evident, arguments for including the elderly, who appear to be most affected by these deficiencies, in the SFP become reinforced (Annex 4).

6.3 Camps for internally displaced populations

It is estimated that the numbers of internally displaced people in developing countries have increased in line with the rise in refugee populations. Such population displacements usually follow insecurity/civil war or long-term marginalisation of agricultural environments caused by drought, environmental degradation or political/economic factors which adversely affect subsistence practices. Displacements usually take place towards larger urban centres, where some form of subsistence is perceived as possible by the migrant population, or which, in the case of civil war, are believed to be relatively safe.

These population groups often belong to politically marginalised/unpopular tribes or ethnic groups who have faced varying degrees of discrimination for many years. Their arrival and presence in large urban centres are therefore not always looked upon favourably by governments which may actively discourage settlement and consequently make only limited efforts to provide essential services. Furthermore, as such populations do not have refugee status, there is no single international agency responsible for their well-being. As a result, assistance from international aid agencies is often poorly co-ordinated and incomplete.

A typical scenario for an internally displaced population will therefore be one where, while many live with relatives and friends in the town, even larger numbers will inhabit large sprawling camps on the outskirts. These camps will often be poorly served by basic amenities, and the population will be partly assimilated into the local economy but extremely vulnerable to economic fluctuations. The camps will often be inaccessible to agency staff at night because of security risks, and the population will not be in receipt of an emergency general ration from the international aid community unless a severe crisis is indicated.

In this type of situation agencies may become aware of the need for a SFP through a nutrition survey which indicates a high level of mild and moderate malnutrition. However, efforts to establish SFP facilities may be resisted by the government which perceives such an infrastructure as encouraging permanence. Thus, where there is eventual success in establishing a SFP it is often necessary to keep the

facility operational even when subsequent nutritional surveys indicate low levels of wasting so that in the event of a subsequent nutritional deterioration occurring, an expanded SFP can be rapidly implemented without having to undertake long negotiations with the government. Indeed, in this type of camp situation the need for emergency SFPs can be very seasonal, as pre-harvest price hikes create severe economic stress for the population. Marked seasonal fluctuations in wasting levels are notorious in camps for internally displaced populations.

Another problem with this type of population is that the camps may have developed in an unstructured way and with poor layout, as migrants have settled with little supervision from government or relief agencies. The camps may therefore cover large areas and have poorly organised internal structures for administrative purposes. Consequently, when emergency SFPs are set up it may prove very difficult to obtain a high degree of coverage of the malnourished population. Enroling the support of CHWs, where these exist, may help to improve outreach. However, a more serious constraint to participation on the SFP may arise, because of the form of economic assimilation of the displaced population. It may be that the majority of carers (mothers) are involved in early morning domestic duties in the town and also in forms of petty trading which create inflexible working hours. Without a regular general ration supplied by the aid community, these forms of employment are critical to the displaced population. As a consequence, SFP staff may find that many children are brought to the feeding centres by slightly older siblings. The work patterns of the beneficiary population are therefore a crucial variable in determining programme success and must therefore be considered in programme design. A rapid appraisal is therefore recommended before setting up a programme. Where conflicts are likely, agencies should opt for dry take-home programmes. Where coverage/participation remains poor, it may be that extra incentives are still required in the form of a larger dry ration or even a family ration for those with malnourished children. The equation is one of whether economically active adults can give up even one day a fortnight to participate in a programme which supplies only a small amount of food for a

Box 22

Improving the coverage of emergency SFPs: Khartoum, Sudan

In spite of many initiatives to improve coverage of the emergency SFPs in the camps for displaced Southerners around Khartoum, coverage between 1988 and 1992 failed to exceed 30% of the eligible malnourished population until a family ration was introduced for those with malnourished children (NIP). Before the introduction of the family ration initiatives to improve coverage included pumping more resources into the CHW system so that eligible children could be traced, improving the supplementary ration to make it more palatable, and use of a mobile loud-speaker system to increase awareness of the facility. However, much of this effort was thwarted by the limited number of CHWs (only 4 per 30,000 population), erratic food supplies from donors and the insecurity of the settlements which were expecting relocation at any time. When a family ration was introduced in 1992 for those attending with malnourished children, coverage almost immediately exceeded 80% of the eligible population.

malnourished child.

The lack of an emergency general ration and the marginal assimilation into the local economy may in some situations determine the operation of SFPs in a context of inadequate general rations. However, particularly for internally displaced populations who are often politically marginalised and under-represented in government decision-making, the existence of a SFP can provide important data about increasing numbers of malnourished individuals, and the performance of those individuals in the feeding programme, that can be used to lobby the aid community to implement the provision of emergency general rations. The existence of such routinely collected data can also provide more timely information on deterioration than nutritional surveys which can only be carried out periodically (Annex 2).

Conflict and its effects on camp SFPs

In many instances migrants may be fleeing war situations. As a result there may be large numbers of traumatised individuals. The effects of severe trauma can be quite dramatic. In the case of adults, the will to live can be lost, as can the ability to care for children. Lactation may have stopped in mothers and may be difficult to re-establish without a great deal of support and, in extreme cases, some form of counselling.

In famine situations where maternal nutritional status and lactation have been badly affected it is generally believed that, with nutritional support through supplementation, at least 98% of mothers should be able to re-establish lactation. However, this percentage may be far lower where there are large numbers of severely traumatised mothers. Furthermore, in the early stages of an emergency it may be very difficult to establish adequate nutritional support facilities for mothers. In such circumstances, in spite of the considerable advantages of breast feeding (and the risks of using infant formula milk), it may be that a significant proportion of mothers require access to infant formula. Where this is the case, infant formula should be made available only under strict supervision, i.e. on-site feeding, while every effort should be made to re-establish lactation in traumatised mothers. In more established camps, the prospects of providing the correct mix of nutritional and psychological support to mothers experiencing difficulty with lactation as a result of malnutrition and trauma should be far better than in the early stages of a camp crisis. In such circumstances the inclusion of malnourished lactating women or mothers with impaired lactation should be a priority for emergency SFPs.

War-displaced populations may also carry with them the seeds of further conflict within refugee camps. A stark example was seen amongst Somali refugees in Kenyan camps, where certain clans or sub-clans were allegedly controlling conditions in the camps to the detriment of others. Although there are no data to support the supposition, it is likely that, as a result of this, food security for certain groups was far more precarious than for those from the controlling clans. Dominant groups within the camps may control access to certain resources, e.g. mills for grain, or employment opportunities outside the camp. Such control may be quite covert and not easily observed by outside agency staff. In such circumstances, data

from emergency SFPs could be used in conjunction with disaggregated anthropometric survey data to demonstrate differences in nutritional status between groups and to verify whether tribal/clan discrimination is adversely affecting the food security of particular groups.

Another conflict-related phenomenon is where camps are close enough to the countries of origin for refugees to return periodically to undertake agricultural or military (rebel) activities. There can be several consequences or implications of this. Where food security in the camps is extremely poor, perhaps due to inadequate general rations, families may take enormous security risks in returning home to plant and harvest. Many lives can be lost in this way and children orphaned. Similarly, where men are encouraged or conscripted to join rebel activities, households may be left temporarily, or permanently, without male support. It may be that such information on individual family circumstances can be obtained from SFPs, especially where these relate to household food security and child nutritional status. Patterns may then emerge about different political/tribal groupings within the camps which can be used to inform policy decisions regarding food security.

Box 23

Difficulties with on-site feeding: Dondo, Angola

According to a survey in July 1994 in Mocoso camp for the displaced in Dondo town in Angola (population approximately 7,500) an estimated 40% of households were headed by women. This population had fled intensified military activity by government forces which had led to the recapture of the provincial city of N'dalatando. Many of the new arrivals were in a severely malnourished state, presenting at the feeding centres with kwashiorkor and marasmus. The high percentage of female-headed households was said to worsen the problem of low participation rates at the feeding centre. Mothers defaulted with their children before they were fully recovered and discharged, because their responsibility of catering for the whole family meant that they could not spend the whole time with one sick child and leave the rest of the family to fend for themselves.

Where internally displaced populations are fleeing civil conflict, as in Southern Sudan or the Shaba region of Zaire, the migrant population may fare differently depending upon tribal/ethnic origin. Some tribes may have close ethnic linkages with the local population, while others may be looked upon more favourably by the government. Economic advantages may result in both cases. The relative proportion of children admitted to SFPs coming from different groups may indicate whether these advantages have a significant impact upon food security and whether agency interventions might need to be modified accordingly.

War-induced displacement (refugee or internal) can also lead to an unusual demographic structure in camps. In some situations there may be a preponderance of female-headed households as the men are conscripted into the army. This can affect the effectiveness of emergency SFPs as mothers find it even harder to participate in programmes which take them away from their other family responsibilities.

6.4 Non-camp: rural resident populations

Almost by definition, programmes for resident populations take place in a situation of less acute emergency than programmes for displaced populations who tend to move as a last resort when all coping strategies have been exhausted. Furthermore, the displacement often increases the nutritional and health risk as populations are forced into camp situations where provision for basic need may not have been properly established.

Nevertheless, the nutritional and health condition of *in situ* populations can still be very serious, with emergency feeding programmes being implemented in a context of severe food shortage. Emergency SFPs for resident populations therefore take place in widely different contexts, ranging from situations where there is a risk of nutritional decline, although none has yet taken place, to a scenario where several years of crop failure and erosion of livelihood have brought the population to the brink of famine and forced migration.

Agencies faced by these diverse situations and aware of the need for some form of emergency feeding intervention frequently face the difficult choice of deciding where to locate emergency SFPs. The choice may be between a village-based programme, a health centre-based programme, or at some intermediate level, e.g. sub-clinics or rapidly assembled feeding centres serving many villages. There are advantages and disadvantages in operating through each type of infrastructure, yet many agencies repeatedly seem not to anticipate the disadvantages while failing fully to capitalise on the advantages. It is clearly important that the pros and cons are considered before deciding on the programme type, and that certain practices are avoided or followed once the infrastructure through which to operate the programmes has been selected.

Village-based programmes

The selection of villages in which to establish emergency SFPs can be a major difficulty, especially where there is a large geographic area affected by the food crisis so that many villages may need to be targeted. In this type of situation there is no tried and tested way to identify needy villages. Nutritional surveys are very time-consuming and will probably give results which are not statistically valid, as numbers of children in each village may be small so that results cannot be compared. Even short-cut methods such as village conglomerate surveys, whereby a central village in a geographical location is surveyed using MUAC measurement and the results are extrapolated to surrounding villages, can be very time-consuming and expensive. There is also the added difficulty of knowing what cut off points or trigger levels to use as a basis for including villages in the programme. Villages may be at different stages of food insecurity. Thus, the population in one village with low rates of wasting may be about to run out of food completely but have managed relatively well until the point of the survey, while another village population with higher rates of wasting may have been under stress for a long time but have evolved coping strategies which have stabilised their situation. Furthermore, as argued elsewhere in this report, nutritional status may be affected by disease patterns and constraints on parental care, so that high rates of wasting may indicate that a greater priority should be given to health and income support than to emergency feeding. It is therefore vital that anthropometric data be

supplemented by contextual data which allow better interpretation of the nutritional data with regard to the need for supplementary feeding.

This type of contextual data can best be described as socio-economic. In other words data that describe the social and economic circumstances of the population, e.g. resources, access to income-earning opportunities, economic and physical access to markets, etc., so that need for extra food can be identified. However, it is no easy matter to obtain socio-economic data. Methods are poorly developed compared with nutritional surveys, and results are subject to gross inaccuracies and bias, e.g. under-representation of resources, cultural mis-understanding. Many methods have been tried by agencies. e.g. rapid rural appraisals using local information sources and key informants or large household budget and expenditure surveys. It is, however, probably true to say that, with some notable exceptions, much of the information has proved unusable for targeting purposes because of obvious inaccuracies and failure to develop methodologies for interpreting the data in advance of the survey/assessment.

Recent experience of attempting inter-village targeting of SFPs raises a number of pointers to good or better practice.

1. anthropometric data must be complemented by socio-economic data

2. socio-economic data collection can be very problematic and resource-consuming, so that attempting to assess socio-economic conditions without prior experience of an area, or without using established information sources/networks, may be justified only where the data are also to be used to inform decisions about targeting greater programme resources, such as in a general ration programme.

Given these two provisoes agencies may need to assess critically why inter-village targeting may be necessary. Usual justifications include lack of resources to cover all villages and fear of the over-supplying of some villages leading to agricultural and economic disincentives. If neither condition really applies then it may be more sensible to include all the villages in a food emergency-affected area in the SFP.

This conclusion is reinforced by the added difficulty that can arise when there is some subsequent change in food security, e.g. a partial harvest, so that the original targeting assessment has to be completely revised. A further complication of inter-village targeting is that the resulting logistical programme can quickly assume nightmare proportions as single villages separated by large distances and very poor roads are identified for inclusion in the programme. Distributing small quantities of supplementary foods to disparate villages may not be a very cost-effective use of resources.

Monitoring. Monitoring village-based programmes can also be highly problematic due to logistical constraints, and can consume vast agency resources. Recent experiences have taught us a number of lessons here as well.

Box 24

Difficulties of monitoring village-based SFPs: Kosti Province, Sudan

A NGO operating a village-based emergency SFP in Kosti Province in Sudan in response to the 1990/91 drought eventually targeted 250 villages out of a possible 650 villages. Selection was based upon MUAC survey results and area coordinators carrying out poorly developed socio-economic assessment procedures. Retrospective evaluation of the programme established that the MUAC surveys were very time-consuming and poorly implemented, that the socio-economic assessments were grossly inaccurate with little standardisation amongst the area coordinators, and that political factors inevitably played some role in the final choice of village. Furthermore, the data collection took so much time that villages could only be phased into the programme over a period of five months as surveys were gradually implemented. Finally, with the arrival of a variable harvest in the province, the vulnerability of villages changed drastically, yet the implementing agency had neither the resources nor the `motivation' to undertake a new assessment in order to re-target the programme.

Given that a primary aim of emergency SFPs is to ensure that vulnerable groups receive a supplement and, where the general ration is poor, to influence intra-household targeting decisions so that the target groups' consumption is protected,

it is important to monitor whether beneficiary households are complying with this aim. It is also important to monitor the regular delivery of foods by contractors and to ensure that there is no `leakage' away from targeted villages. Monitoring must therefore be regular and take the form of site visits, checks on stores to determine that planned quantities are delivered, and assessments to determine that offtake from the village stores correlates with the number of identified beneficiaries in the village, e.g. to ensure that other individuals are not being supplied. This workload can be enormous where villages or feeding points are separated by large distances and can lead to a situation where either the majority of agency resources are literally expended in these activities or the monitoring is so poor that serious problems remain unsolved for long periods.

Box 25

Monitoring difficulties in Kordofan Province, Sudan

A NGO operating an emergency SFP through 60 widely dispersed health centres in rural Kordofan in Western Sudan as a result of the 1991/2 drought took several months to find out that food deliveries were not reaching many feeding points and that this resulted from the transport contractors' reluctance to undertake long journeys in order to distribute small quantities of food. The large distances involved and the poor roads meant that it was virtually impossible for the implementing agency to keep a close eye on the intervention. The programme was eventually suspended as a result and re-designed to include a much smaller number (18) of needy villages.

An important point about monitoring is that agencies need to take care that monitoring does not turn into policing. An increasingly frequent scenario is that where donors provide sufficient cereals for an emergency general ration but only small quantities of legumes and oil. As a consequence, agencies may decide to allocate the beans and oil through a village-based dry take-home SFP. However, the lack of these commodities in the households basic diet may determine that many non-eligible families will be given beans and oil by village allocation committees on the grounds that they are also poor and in desperate need and that eligible families do not in any case target the beans and oil on the agreed target

groups. While an agency is entitled to try to encourage households and village committees to conform with the aims of the SFP in this type of situation, it is important that the policy does not become coercive, e.g. by punishing villages which abuse the system. Ultimately, once open discussions have taken place, intra-village and intra-household targeting decisions must be respected by agencies, so that vast resources do not need to be expended on `checking up' and penalising beneficiary villages.

Data collection. Attempts to introduce data collection at village level in the context of an emergency SFP have often proved unsuccessful. Experience of setting up a growth-monitoring capacity, even in its simplest form, has not been good. There are many reasons for this, including the difficulty of training illiterate village people, the poor motivation of data collectors who are unpaid, lack of transport to visit satellite villages away from the feeding centre, lack of equipment and insufficient back-up field visits from agency staff. The lessons from this experience are that there should be no attempt to set up growth monitoring from scratch in village-based programmes in the teeth of an emergency. Once the acute emergency phase is over or the programme is running effectively and the implementing agency is not overstretched, and if it is intended to continue the SFP, then it may be possible to establish simple forms of growth monitoring. However,

Box 26

Difficulties of monitoring village-based SFPs: Southern Zimbabwe

An NGO operating a village based emergency SFP through 1,600 village feeding points in 2 provinces in Southern Zimbabwe trained village people in weight monitoring. Villagers were only asked to record weight of children (height and age were not recorded). Even with this simplified type of measurement, it still proved extremely difficult to get villagers to record weight regularly and accurately. Scales went missing and registration books contained long columns where data were not entered. Furthermore, the difficulty of monitoring over 1600 dispersed feeding points meant that it was only towards the end of the feeding programme that it became apparent that data collection was poor and the resulting data of limited use. It is worth noting that this situation occurred in spite of the fact that road infrastructure in Southern Zimbabwe compares favourably with many other African countries in the region.

one type of data collection and monitoring that may be more feasible in a village-based SFP than a health centre-based SFP is the identification of defaulters and subsequent follow-up to determine the cause.

Another weakness of village-based SFPs is that these cannot easily be implemented in conjunction with certain types of health input which require specialised and trained health staff. Consequently, if the food emergency becomes severe and some individuals become severely malnourished, then these cases will need to be referred to the nearest health centre. Furthermore, in a village-based SFP it may be far harder to identify all such cases. Similarly, if the food emergency occurs in an area where vitamin A deficiency is endemic and likely to be exacerbated by the food shortage or some other micro-nutrient deficiency is likely to occur, then diagnosis and treatment may be far harder in a village-level SFP. It may therefore be advisable to try to predict (however inaccurately) which infrastructure to utilise in advance of deciding, the likely nutritional impact of the emergency on the prevalence of severe malnutrition and the micro-nutrient status of the population

in order to determine whether a village- or health centre-based intervention may be most appropriate.

Health centre-based programmes

The decision to implement emergency SFPs through health centres may be based largely on convenience as health centres tend to have good service infrastructure and to be located where population density is greatest. Furthermore, existing staff can treat serious cases of malnutrition and relatively easily administer the complementary medical activities and growth monitoring necessary as part of a SFP. The main disadvantages of operating through existing health centres are that centres may not be located where the need is greatest (in fact health centres are often not located in the poorest rural areas), and that outreach will be less than in village-based programmes. Furthermore, such programmes will take up more beneficiary time as most participants will need to travel greater distances to the feeding programme.

Recent experiences show that there are a number of important considerations with health centre-based programmes which are often ignored.

One important consideration is that in many developing countries Mother and Child Health (MCH) programmes at health centres routinely conduct growth monitoring of children under five, and that in many cases this information is collated and analysed at district, provincial and national level. These data are subsequently published and provide baseline levels of malnutrition at different administrative levels. They also show trends in patterns of malnutrition, e.g. seasonal and drought-related. The information can then be used for targeting development initiatives and in some cases for early warning of food crisis. As these are clinic-based data they are obviously biased, as the poorest sections of the population may not participate in the MCH programme. Nonetheless, it is believed that they allow useful comparisons between areas and useful trend analysis. In many countries this information resource has been built up over many years and has become a useful operational tool for policy and planning in development and emergency relief.

However, this growth monitoring is usually based upon weight-for-age measurements, which, as discussed earlier, is a measure of past as well as present nutritional status. Thus, children with low weight-for-age may be short (stunted) but not thin (wasted). They therefore have a low weight-for-age due to a past episode of malnutrition. Consequently, there may be limited benefit in enroling such children in emergency SFPs. The current view is that stunted children can benefit from additional (supplementary) feeding up to the age of two, i.e. catch-up growth is possible. However, the morbidity and mortality risk amongst stunted children is far less than amongst wasted children.

In most rural communities levels of malnutrition as defined by low weight-for-age are much higher than levels of malnutrition as measured by low weight-for-height (wasting). Thus, any attempt to operate an emergency SFP utilising weight-for-age measurements will initially lead to the enrolment of far greater numbers than if weight-for-height measurements were used. In fact, the optimal practice in such a situation would be to enrol all malnourished under-five children less than 80% weight-for-age (third percentile growth curve) and to follow their growth for two to three months. Any children over two years of age who follow the growth curve but remain under 80% could then be discharged on the basis that they are currently growing normally and not at heightened risk and that there is limited benefit in their inclusion in a SFP. However, the potential problem of being overwhelmed by numbers in the early stages still remains. Also, numbers enrolled in the programme even after a few months will still be greater than if weight-for-height measurements were used, as stunted children under two will be included.

Clearly, in most situations it would not be advisable to change the system of growth monitoring to weight-for-height measurements as this would necessitate a large amount of retraining of staff and purchasing of new equipment. It would also radically change the baseline data of the national growth-monitoring system. However, in some situations it may be feasible, e.g. where the agency is working through a small number of health centres.

Another difficulty that is rarely anticipated is the effect on attendance of distributing emergency SFP rations through an existing MCH programme structure.

The inevitable response to this type of programme is that more individuals attend the health centre in order to obtain the SFP food ration. The more acute the food stress in the area or the larger and more diverse the supplement, the greater the pull of the feeding programme. Numbers attending MCH programmes have been known to quadruple with the introduction of an emergency supplementary ration.

Box 27

Changing anthropometric measurement methods: Angola and Malawi

One agency working out of a small number of health centres in conflict besieged towns of Angola switched measurements from weight for age to weight for height as the centres were admitting too many unnecessary cases and it was fairly easy to train existing staff to do this. Furthermore, the growth monitoring data were not being used as part of a national nutritional surveillance system. Another agency working through five MoH staffed feeding centres in Dedza in Malawi also changed measurements during the programme. Once again these data were not part of an existing nutritional surveillance system and the limited number of centres determined that the change-over was relatively easily achieved and supervised by the agency. In both country cases one of the aims was achieved in that the number of admissions dropped dramatically improving the efficiency of the programmes and ensuring better supervision and monitoring of those admitted to the programme.

There can be several effects of such an increase in numbers. MCH staff work loads will increase substantially, especially where they have responsibility for

Box 28

The influence of attendance rates on growth monitoring: Southern Zambia

MCH growth-monitoring data from two districts in southern Zambia did not indicate a deteriorating nutritional situation when the decision to implement an emergency feeding programme following crop failure in 1992 was taken. At this time levels of malnutrition amongst those seen at the MCH programme were less than 20%. With the introduction of an emergency SFP ration at the health centre, attendance dramatically increased, especially following the addition of oil to the ration. This coincided with increasing levels of malnutrition as determined by the percentage of children who were measured as malnourished on presentation at the MCH programme. When the programme started to be phased out following the next good harvest, levels of malnutrition at the health centres were in excess of 30%, reflecting the type of beneficiary participating in the MCH programme.

storing, allocating and accounting for the food rations. Great care must therefore be taken to ensure that this extra workload does not interfere with their normal health programme activities. Where such a conflict does arise it is important for implementing agencies to consider employing other individuals to take on some of the extra responsibilities arising out of operating the emergency SFP.

Another consideration, and one which is often overlooked, is the potential effect of the increase in attendance at the MCH programme on the existing data base. A large increase in attendance once feeding is introduced usually indicates that households that would not normally participate in the MCH programme because they may live further away or be poorer so that, previously, the opportunity cost of participation in the MCH programme was too high, are now attending . As a consequence, the nutritional condition of this section of the population may be much poorer than that of those who normally attend the MCH clinic. Experience shows that this is often the case, so that when numbers increase, the overall levels of malnutrition, as indicated by the growth monitoring at the MCH programme, also increase significantly. These higher levels of malnutrition seen at the health

centres can then be maintained throughout the emergency SFP and may even continue when the SFP has been phased out. As a consequence, it may appear that the emergency SFP has been associated with an increase in levels of malnutrition. Furthermore, the increased levels of malnutrition which continue to be seen amongst those attending the MCH programme at the end of the SFP, make redundant much of the baseline data collected in previous years which may have been used for targeting and early warning purposes.

It is important to be aware of this phenomenon for several reasons:

First, it is important to make some attempt at protecting the data base. This may be done by separating out new attenders from old attenders once the feeding programme begins. The feasibility of this will depend upon the way data are recorded and collated at clinic level. Second, the new population effect must be taken into account in interpreting the higher levels of malnutrition. Thus, increased levels of malnutrition do not necessarily indicate an ineffective SFP or a rapidly deteriorating food security situation. Also, it may not be advisable to wait for levels of malnutrition to revert to pre-SFP levels before ending the programme.

Finally, it is important for agencies to pre-plan for increasing attendance at MCH programmes so that health inputs can be maximised. This will necessitate working closely with the MoH and supporting agencies such as Unicef at district, provincial and national level. Depending on the cause, food emergencies are usually associated with increased prevalence of certain diseases, e.g. diarrhoea, scabies, and micro-nutrient deficiency, and increased risk due to certain conditions, e.g. measles. It is therefore vital that agencies help the MoH pre-plan potential drug and vaccine needs once the SFP is operating. The likely increase in attendance is the perfect opportunity to fulfil EPI goals better. All too often health centres run out of the necessary drugs and vaccines once emergency SFPs are implemented. Agencies will therefore need to think through the likely demand for MCH services with district MoH staff. These calculations will need to be based on assessments of the population of health centre catchment area and, where applicable, the previous experiences of emergency SFPs in the area.

Given the considerable agency resources required to establish a health centre-based emergency SFP (e.g. logistics, setting up storage, monitoring, etc.) and the limited resources finally allocated, e.g. a supplementary ration barely provides for 10% of household caloric needs, it is almost axiomatic that the provision of complementary health inputs should be given equal priority to the provision of the supplement. It therefore seems reasonable to argue that any evaluation of the emergency SFP at health-centre level should include evaluating the goals of increased vaccination and provision of drugs.

6.5 Non-camp: displaced populations

In some circumstances rural populations may be displaced to other villages rather than to large urban centres. A fairly common situation is when a refugee populations assimilates with the local rural population rather than moving into a refugee camp. In parts of Malawi it was estimated that during the civil war in Mozambique up to 40% of the Mozambican refugee population came to reside in local villages in Malawi rather than in nearby camps. Civil war and drought can also lead to situations where there is large-scale rural displacement to other less affected rural villages.

Where this type of displacement occurs it is likely that those displaced have some familial or ethnic linkage with the resident population, which allows them to seek some support from the latter. If this were not the case and resources were in short supply, resentment amongst the local community would build up very rapidly. This support can be vital in the early stages of a refugee crisis before the international community have time to mobilise their response.

The economic impact of large displacements into rural communities can be substantial. Where the displaced are refugees, it is likely that the international aid community will eventually provide some assistance. Where the population is internally displaced, local NGOs may provide support. Paradoxically, a situation can arise whereby the displaced (who may or may not be in camps) begin to fare better than the local community whose resources are depleted as a result of their

generosity in supporting the displaced. It is not uncommon to find higher levels of food insecurity and malnutrition amongst host populations than amongst the displaced. It is therefore very important, where emergency SFP facilities are established for displaced rural populations, that the local population are also targeted where appropriate.

Conflict and its effects on non-camp SFPs

In rural conflicts, e.g. Southern Sudan, Liberia, where large numbers of people are still resident in villages, establishing emergency SFPs can be highly problematic. Much of the population may be unable to farm, trade may have been severely disrupted and relief efforts may be hampered/restricted and dependent on `hit-and-run' relief convoys and air drops dispatching food when and where possible. It may thus be very difficult to target general rations and even harder to assess their adequacy, as insecurity would preclude village-level surveys of food security or nutritional status.

A decision to operate an emergency SFP would therefore need to be based upon `impressions' of the levels of malnutrition and food insecurity. The ability to supervise and monitor a village- or health centre-based emergency SFP would be very limited in areas of insecurity. Also, large quantities of supplementary food may be easily lootable and may place at risk those responsible for storing and allocating food. Furthermore, populations may be in a state of flux or may need to move at any time so that centres effectively close down, rendering much of the data collection redundant. Clearly, the ability to operate an effective emergency SFP for a resident population will depend upon the level of insecurity. Where this is high the best that an implementing agency may be able to do is to provide a large general ration that covers any supplementary food needs. Where agencies can operate in relatively secure areas, e.g. some way from the fighting, SFPs may be able to provide useful data on the nutritional and food security situation in the catchment area, based upon rates of recovery, levels of admissions and re-admissions, and case histories of attending families.

6.6 Urban: resident populations

Emergency SFPs for resident urban populations may be necessary where large-scale harvest failure has led to massive inflation of food prices, or removal of government subsidies or general economic decline is causing economic hardship for large sections of the population. However, assessing the need for an emergency SFP based upon levels of malnutrition or general ration adequacy can be very problematic. The population density and the highly stratified nature of urban society would necessitate large sample sizes for nutritional surveys. Furthermore, the extremely diverse nature of urban economic activity (much of it based upon the `black' economy) would make it very difficult to assess the adequacy of general rations for urban populations. The decision to implement an emergency SFP would therefore most probably need to be taken on some other basis, such as changes in the price of key staple foods, rising levels of unemployment and associated begging in the streets, and increased numbers of cases of malnutrition being seen at urban health centres and hospitals.

The need for an urban emergency SFP would probably necessitate large numbers of feeding centres because of high population density. Many of these centres could be attached to the existing health infrastructure, while some might be operated through schools or other public buildings. This may lead to a situation where large numbers of local agencies are implementing emergency SFPs. The risk here is that the overall programme is poorly coordinated, with large variation in design and data procedures between centres. In order to avoid this it is important that one agency should assume overall responsibility for the programme in order to encourage a standardised and professional approach. One advantage of implementing an emergency SFP within an urban setting is that it is likely that there will be no shortage of well qualified local staff who can implement a well-run programme.

6.7 Urban: displaced populations

It is far more usual for those displaced from rural areas by war, drought or economic hardship to migrate to large urban centres where economic opportunities are perceived as greatest rather than to other rural locations. Such populations may not move into camps but may prefer to establish homes in the urban periphery/shanty towns. This population group is likely to inhabit the lowest economic stratum of urban life and will be the first to be affected by deteriorating urban economic conditions.

The shanty towns are areas which are likely to be poorly served by basic amenities. The nearest health centres may well be some distance from the displaced population. When an emergency SFP is established it is thus likely to be established through existing MCH facilities. It may therefore be prudent to adopt a dry take-home ration system in order to limit the time required for participation. The need for a form of emergency SFP which imposes limited opportunity costs on accompanying carers is strengthened by the likelihood that many of the urban displaced will be involved in some form of economic activity which is essential to their survival (Annex 3).

Conflict and its effects on urban SFPs

In some war situations resident urban populations can be virtually cut off from the outside world and living in a near state of siege, e.g. Kuito in Angola, Juba in Southern Sudan. The town may be accessible to outside relief agencies only by air, which in turn depends upon flight permission from the warring factions. In this type of situation populations can be isolated for many months, so that when relief agencies finally gain access they discover a population in a state of extreme distress. This may have resulted in very high mortality rates amongst the most vulnerable, e.g. young children and the old, with the remaining older population now in nutritional decline and many adults showing varying degrees of malnutrition. Alternatively, dwindling food reserves may result in a situation where adults sacrifice their own consumption to that of their children. Nutritional surveillance data in Sarajevo have shown that most weight loss amongst the population occurred in adults and the elderly and was partly attributable to the preferential feeding of children when food resources were scarce. In such a

situation there may be an urgent need to establish emergency therapeutic and supplementary feeding facilities for adults as well as children (Annex 4).

Another scenario is that of civil war, the urban centre being relatively secure (i.e. a long way from the front) but receiving many war-displaced migrants, a large proportion of whom are in transit. The town may also be subject to periodic outbreaks of violence and insecurity as food convoys attempt to reach it or because of the general level of disorder and weaponry amongst the urban population, e.g. Baidoa in Southern Somalia.

One common feature of operating supplementary feeding in this type of situation is that the provision of general rations by the international aid community may be highly problematic. The problem is lack of safe access. Thus, agencies will frequently find themselves operating in the context of an inadequate or completely absent general ration. The consequences of this are that it may be impossible to discharge individuals from the SFP as there is no general ration at home so they would rapidly be re-admitted. The programme will then increased very quickly in size, so that it will need to be streamlined in order to be made manageable. In the initial stages it may not be possible to carry out the majority of normal data collection. For example, weight-for-height measurements may need to be replaced by more rapid screening using MUAC. It may also prove impossible to enrol all severely malnourished children in therapeutic feeding, with the result that many of the less extreme cases may have to be enrolled in the SFP. As indicated previously, this may be an additional argument for operating an on-site SFP so that such cases can be carefully monitored.

In fact, on-site feeding is often felt to be particularly justified in situations of insecurity, as there is a higher risk of looting where dry take-home rations are given. Mothers taking home one- or two- week supplies of supplementary foods would be put at risk. Even in situations of extreme insecurity it is rare for a feeding centre with large numbers of women and children to be attacked. Also, war-displaced populations are frequently without basic cooking utensils as they may have had to leave their homes suddenly. However, these advantages of on-site feeding may have to be weighed against the lesser outreach of such programmes.

In areas of insecurity, it may be very difficult and dangerous for mothers/carers to travel regularly to a feeding centre (Annex 3).

This type of urban SFP may also need to accommodate sudden large waves of displaced people, many of whom may be in a very poor nutritional condition. Feeding centres might therefore need to admit large numbers of very serious cases. In the event that this overwhelms resources, eligibility criteria may need to be altered so that only the most severe cases are admitted. Thus, entry criteria for SFPs may need to be changed from 80% weight-for-height to 75% weight-for-height or 13.5 cm to 13 cm MUAC.

As with an urban siege scenario, a situation may arise where, after a long period of poor general ration provision to an area, the population is in a state of extreme stress. This may have resulted in very high mortality rates amongst the most vulnerable groups, e.g. young children and the old, with the remaining older population now in nutritional crisis and many adults showing varying degrees of malnutrition.

Another slight variation on this scenario may arise where the supply of general rations has continuously been interrupted because of insecurity, ambush and looting, while supplementary and therapeutic feeding programmes for children have been allowed to continue partly because the food commodities are at less of a premium and partly because the warring factions accept that such programmes are not legitimate military targets. In such circumstances the need for therapeutic and supplementary feeding for adults may be urgent (Annex 4).

However, as explained in Chapter 2, the difficulty with targeting adolescents, adults and the elderly in SFPs is that there are no properly tried and tested methods for assessing malnutrition amongst these age groups. Currently, there is some research on using proxies for height in the elderly, e.g. demi-span, although there has been no field testing in emergency situations. It seems likely that a long process of devising appropriate measurement techniques and defining local standards of risk will be needed before such measures can be used in the field. In the meantime agencies will have to go it alone but should not let lack of consensus

about methods of defining risk in adolescents and adults prevent targeting these other groups for emergency selective feeding programmes.

Box 29

Adult-only therapeutic feeding: Baidoa, Somalia

Because of the high levels of severe malnutrition found amongst adults in Baidoa in Somalia in 1992, one NGO established therapeutic feeding facilities for adults only. Separate facilities were considered necessary as the heavy demands of re-feeding severely malnourished adults were seen to be detracting from the care that should have been given to severely malnourished children. This pioneering work found that there were many problems in measuring and weighing severely malnourished adults. First, such individuals often had contractures (inability to extend limbs) due to being inactive for a long period, it was therefore impossible to measure height. Second, very severe cases were unable to stand on the scales unassisted. BMI measurements were therefore found to be inaccurate. Furthermore, such measurements were not found to be associated with outcome, i.e. the lower the BMI, the greater the likelihood of death. Instead, visual assessments of malnutrition in conjunction with evidence of particular disease states were found to give a more accurate prognosis.

Requirements for data collection and analysis need to be carefully reviewed in conflict situations. Training local staff in data collection and analysis may be especially pressing where insecurity is likely to lead to the periodic evacuation of international aid agency staff, in order to ensure continuity of information. Situations can also arise where the beneficiary population are in a rapid state of flux as its members are in transit to some other location or return periodically to their village to undertake some activity. Feeding centres will then experience very high rates of default which will be impossible to follow up. This type of situation might determine that less emphasis be given to data collection until the population served is more stable, or alternatively that evaluation criteria are adjusted to account for the high rate of flux.

Annex 1

Key emergency supplementary feeding programme guidelines

Guidelines

AICF (1993) *Prevenir la Denutrition dans les Populations a Risque*. Module iv, January 1993, Paris.

ICRC (1986) *ICRC Policies in Emergency Situations*, Geneva.

Lusty T and Diskette P (1984) *Selective Feeding Programmes*. Oxfam Practical Health Guide No 1, Oxford.

MSF (1995) *Nutrition Guidelines*. Co-ordinated by M Boerlart, A Davis, B Lelin, M J Michelet, K Ritmeijer, S van der Kam and F Vautier.

SCF (1987) *Drought Relief in Ethiopia*. Compiled by J Appleton with the SCF Ethiopian Team, London.

UNHCR (1982) *United Nations High Commissioner for Refugees Handbook for Emergencies*. Geneva, December 1982.

WHO (1995 in mimeo) *The Management of Nutritional Emergencies in Large Populations*, Geneva.

Young H (1992) *Food Security and Famine*. Oxfam Practical Health Guide No. 7, Oxford.

Further Reading

Beaton G (1993) *Nutritional Issues in Food Aid*. Papers from the ACC/SCN 19th Session, April 1993, pp 37-55.

Ghassemi H (1992) `Supplementary Feeding Programmes in Developing Countries: Lessons of the 1980s'. Part 2, Discussion and References, *Asia Pacific Journal of Clinical Nutrition*, Vol. 1 pp. 195-206.

Gibb C (1985) `A Review of Feeding Programmes in Refugee Reception Centres in Eastern Sudan'. *Disasters*, October 1995, Vol. 10:1 pp. 17-24.

Seaman J and Rivers J (1988) `Strategies for the Distribution of Relief Food'. *Journal of the Royal Statistics Society (A)*, Vol. 151:3 pp. 464-472.

Shoham J (1995) *Towards a Revision of Emergency Supplementary Feeding Programme Practices*. Report Commissioned by UK Overseas Development Administration. Centre for Human Nutrition, London School of Hygiene and Tropical Medicine.

Annex 2

Checklist for determining whether and how to implement an emergency SFP in the absence of adequate general rations

What valid justifications might there be for an agency to implement an emergency SFP in the absence of adequate general rations?

The following are a set of criteria which, when taken together, may justify programme implementation:

- **!** The agency is working in an area affected by a food emergency, so that staff feel that they must take some initiative

- **!** The agency lacks the capacity to implement an adequate general ration programme

- **!** The programme is perceived as a curative programme which acts as a holding operation preventing mortality and until another agency can secure better general rations **or**

  The programme is perceived as a short-term preventive programme targeted to groups believed to be at heightened nutritional risk until an adequate general ration can be secured

- **!** The SFP provides the opportunity to have a field presence and to use this to monitor the adequacy of general rations and to provide data which can be used as a lobbying tool for better general ration provision, e.g. numbers of cases of malnutrition.

Are there other criteria which may be situation- or agency-specific?

The following are a list of other possible criteria that might contribute to a decision to implement a programme in the absence of adequate general rations:

- The programme is perceived as having a high profile which might be exploited to generate funds for the implementing agency

- Donors may be more willing to fund such a programme, because, given agency resources, it will be easier to account for food distributions than in a general feeding programme

- The infrastructure for large-scale therapeutic feeding already exists because of the level of severe malnutrition so that there is little extra expenditure in admitting mildly and moderately malnourished individuals who have not passed through therapeutic feeding to the existing SFP component of the programme

- The agency is implementing a medical/health-care programme which cannot be properly effective without accompanying emergency feeding

Having taken the decision to implement an emergency SFP in the absence of an adequate general rations, what rules of thumb and design considerations should be adhered to in order to achieve the best programme results?

- Before implementation, talk with beneficiary households to explain why this form of targeting is being encouraged and listen carefully to comments about the likely compliance with the aims of the programme

- Ensure that the programme is carefully monitored in order to determine whether the target groups are receiving adequate amounts of the supplement

- Increase the size of supplementary ration above normal levels but not to the extent that it creates pressures to starve children deliberately or that it approaches the level of a family or general ration programme

- Streamline programme design, e.g. dry take-home rations and minimal data collection, so that, in the event of large numbers of beneficiaries participating, agency resources are not overwhelmed

! Pay particular attention to SFP ration commodities, i.e. use of pre-mixes to encourage target group consumption and commodities which will make up any shortfall in the micro-nutrient content of the general ration.

Annex 3

Checklist of questions to determine whether to implement an on-site or dry take-home emergency SFP

In most situations dry take-home ration programmes are preferable. Current guidelines and the literature generally identify only two types of situation where on-site feeding may be justified. These are where insecurity prevents dry rations from being taken home safely, and where the beneficiary population has no access to cooking facilities, e.g. recently displaced.

However, in some situations other considerations may also support a role for on-site feeding. The following are a checklist of factors that may need to be considered:

- **!** On-site feeding may ensure greater net supplementation of the target group than a dry take-home ration and may also conserve scarce agency food resources as a smaller ration is allocated than in a dry take-home programme where ration design takes account of sharing (these assumptions are highly controversial however, see Section 4.3)

- **!** MoH guidelines advocate the use of on-site feeding, or the beneficiary population has a recent history/tradition of this type of programme so that the programme can be more rapidly established than a dry take-home programme

- **!** on-site feeding allows more regular and intense contact between agency staff and beneficiaries, thereby allowing better opportunities for community development initiatives and certain types of health-care

- **!** the infrastructure for on-site feeding will already exist in emergency situations where large-scale therapeutic feeding programmes have been established. Furthermore, where therapeutic feeding facilities are being overwhelmed by demand, on-site SFP facilities provide a better opportunity

to monitor the severely malnourished closely than dry take-home ration programmes

- on-site feeding programmes may be perceived by agencies and host governments as providing a higher-profile activity than a dry take-home programme for attracting donor resources and for satisfying the public that effective action is being taken.

Where some of these factors are considered applicable so that there may appear to be an argument for implementing an on-site feeding programme, two further steps may be necessary before full programme implementation.

These are:

- some form of rapid appraisal whereby carers of potential beneficiaries are consulted about the preferred programme design in order to determine whether their full participation is likely or whether the opportunity cost of participating in an on-site programme is too great

- implementing a two-tier system of dry take-home rations and on-site feeding simultaneously thereby allowing participants to select the most appropriate design for themselves. For purposes of speed the dry ration take-home programme may be established first of all, with on-site feeding introduced gradually. Once both types of programmes are in operation advantages to both beneficiaries and implementing agency can theoretically be maximised, although, in the event that one type of programme is significantly more effective than another in rehabilitating mildly and moderately malnourished individuals, beneficiaries could be encouraged, but not coerced, to switch to the more effective type of programme design.

Annex 4

Checklist of questions to identify and prioritise the most appropriate target groups for emergency SFPs

The assumption is made here that children under five years of age will always be the priority target group for emergency SFPs. However, the selection of `other' target groups and the relative priority to assign to such groups, may require consideration of a number of factors. At the very least, a flexible approach will be needed.

The following is a list of questions which should be considered in selecting the `other' target groups:

- are there already high levels of wasting (assessed visually or using BMI or BMI proxy measures) amongst adolescents, adults and the elderly?

- are the emergency circumstances likely to lead to a marked deterioration in the nutritional status of adolescents, adults, and/or the elderly, e.g. high levels of looting of general rations, preferential targeting of children within families faced with severe food shortage?

- is the general ration lacking in certain micro-nutrients which is likely to predispose particular groups (not under-fives) to risk of deficiency, e.g. vitamin C and B3?

- are disease patterns affecting particular groups (not under-fives) and contributing to high levels of malnutrition amongst these groups, or are there types of disease that are significantly affecting particular groups (not under-fives) which are not being adequately dealt with by the existing health infrastructure and which could temporarily be addressed by providing medical inputs through feeding centres?

- are existing infrastructure and agency resources adequate to identify `needy' other target groups, e.g. can staff implement suitable selection criteria, and

cover the requirements of the entire target population, e.g. if it is a large population group such as the elderly, is there enough food?

! in a situation where general rations are inadequate, have the work demands of other target groups increased substantially and are these vital to the survival of the household

If the answer to some of these questions is yes, then there may be strong arguments for including other target groups, e.g. not just under-fives, in the emergency SFP or for adopting a programme design which allows beneficiaries more freedom in intra-household targeting decisions with regard to the supplement.

Acronyms

AICF	Action Internationale Contre la Faim
BMI	Body Mass Index
BMR	Basal Metabolic Rate
CDC	Centre for Disease Control
CHW	Community Health Workers
CSM	Corn-Soy Meal
EPI	Expanded Programme of Immunisation
ICRC	International Committee of the Red Cross
MCH	Mother and Child Health
MoH	Ministry of Health
MSF	Médecins sans Frontières
MUAC	Mid-Upper Arm Circumference
NCHS	National Centre for Health Statistics
NIP	Nutrition Intervention Programme
PEM	Protein-Energy Malnutrition
SCF	Save the Children Fund

SFP	Supplementary Feeding Programmes
TB	Tuberculosis
TF	Therapeutic Feeding
WFP	World Food Programme
WHO	World Health Organisation

Relief and Rehabilitation Network

The objective of the Relief and Rehabilitation Network (RRN) is to facilitate the exchange of professional information and experience between the personnel of NGOs and other agencies involved in the provision of relief and rehabilitation assistance. Members of the Network are either nominated by their agency or may apply on an individual basis. Each year, RRN members receive four mailings in either English or French. A Newsletter and Network Papers are mailed to members every March and September and Good Practice Reviews on topics in the relief and rehabilitation field every June and December. In addition, RRN members are able to obtain advice on technical and operational problems they are facing from the RRN staff in London. A modest charge is made for membership with rates varying in the case of agency-nominated members depending on the type of agency.

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