

United Nations
High Commissioner
For Refugees



World Food
Programme

**UNHCR/WFP GUIDELINES FOR
SELECTIVE FEEDING PROGRAMMES
IN EMERGENCY SITUATIONS**

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**United Nations High Commissioner for
Refugees**

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I. PURPOSE

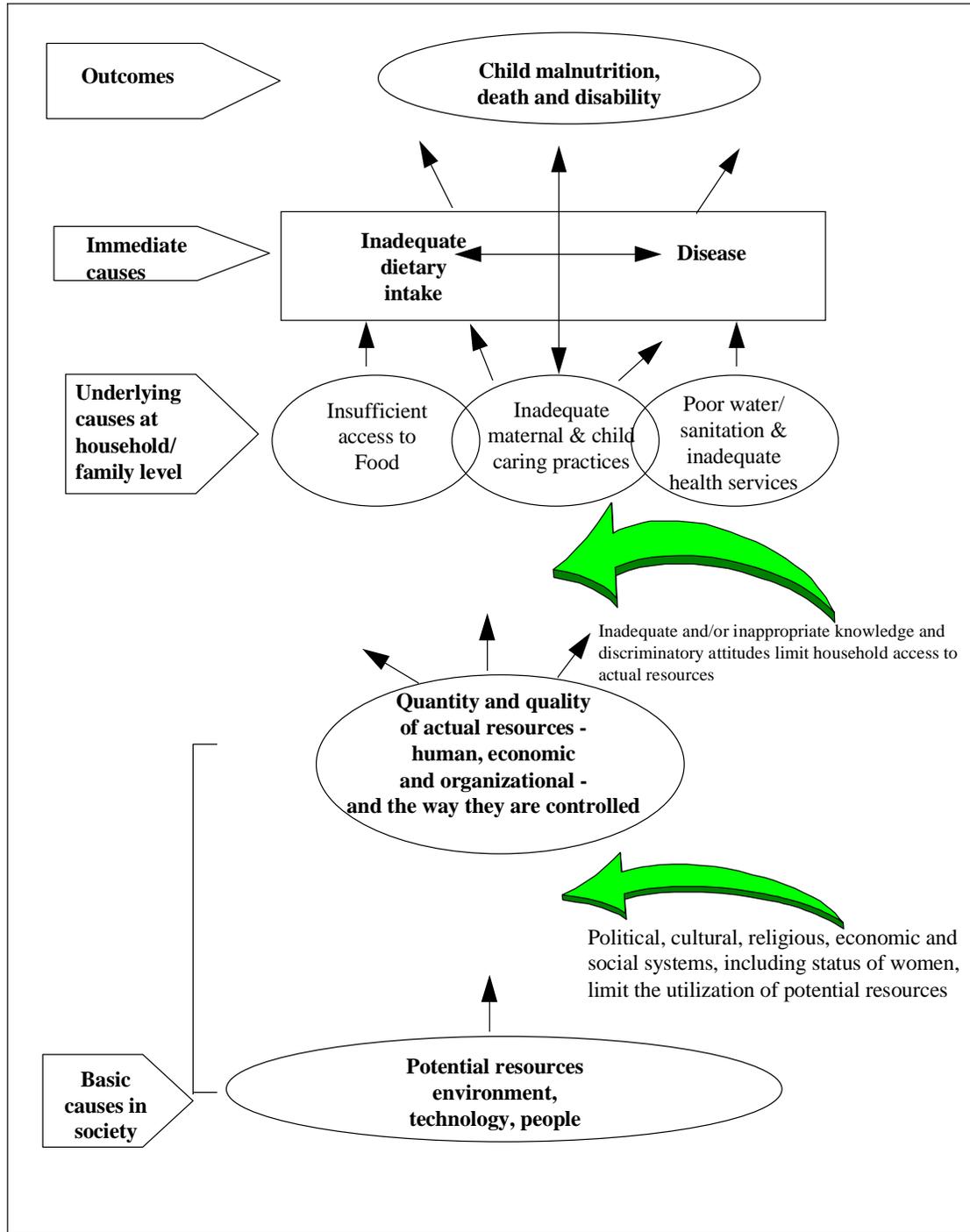
1. These guidelines describe the basic principles and design elements concerning food and nutrition related aspects of Selective Feeding Programmes in Emergencies and Relief situations. They are intended to provide guidance to WFP and UNHCR and other relief staff in the design, implementation and monitoring of Selective Feeding Programmes in both emergencies and protracted relief situations. The nutrition strategies addressed in these guidelines are to enable an effective response and nutrition rehabilitation. Medical and other care approaches are not dealt with in these guidelines. For more information a list of references is provided in Annex 1.
2. Every situation has individual features which lead to different objectives being set, and to different approaches to Selective Feeding Programmes. These guidelines cannot cover the wide range of situations. The type of supplementary feeding programme should therefore be designed according to the situation but should nevertheless remain in line with the frame work of these guidelines.

II. BASIC PRINCIPLES

3. In emergency situations, WFP and UNHCR try to ensure that the food needs of the population are met through the **provision of an adequate general ration**. However, in certain situations there may be a need to provide additional food for a period of time, to specific groups who are already malnourished and/or are at risk of becoming malnourished.
4. These interventions have to be seen in the context of a general ration being distributed. The impact of Selective Feeding Programmes aimed at compensating for inadequate general rations has proven very limited and not cost-effective. Thus to be effective, the extra ration must be **additional** to, and **not a substitute** for, the general ration.
5. Many factors influence nutritional status (as shown in Figure 1). It should therefore be kept in mind that interventions must be multi-sectoral and cover food, health, hygiene, sanitation and care. A properly designed nutrition survey and complementary analysis of the causes of malnutrition can help to guide the need to implement Selective Feeding Programmes.
6. National health authorities and NGOs have an important role to play in nutritional interventions. In emergency situations NGOs usually organize and implement Selective Feeding Programs. They form an integral part of the efforts to prevent and treat malnutrition among young children, women and other at-risk groups.
7. Selective Feeding Programmes should have clear objectives and criteria, defined from the beginning, for opening, admission, discharge and closure. In order to be effective, Selective Feeding Programmes need to be integrated into Community Health Programmes, which offer health and nutrition services like Safe Motherhood, immunisations, nutrition and health education and growth monitoring. Integration facilitates referrals between services and the phasing out of Selective Feeding Programmes.
8. In addition to nutritional and medical treatment, care is an essential part of rehabilitation. Care in nutrition refers to the practices of the care givers in the household which translates food security and health care into rehabilitation, growth and development. These practices include care for women, breast-feeding, infant feeding, psycho-social care, sanitation and hygiene practices, food processing and preparation, and home health practices (1). These issues can be addressed through Selective Feeding Programmes in the form of education, individual counselling, social activities and involvement of caretakers in the programme.

9. The community must be consulted to the extent possible during programme design and women must take part in the decision making from the outset (2).
10. Proximity of feeding centres to the population and availability of trained health staff are a prerequisite when Selective Feeding Programmes are being considered.
11. The policy of UNHCR and WFP concerning safe and appropriate infant and child feeding, in particular the protection, promotion and support of breast feeding must be respected (3).
12. When planning the food needs of Selective Feeding Programmes the energy density as well as the fat, protein and micronutrient content of food commodities must be considered. In addition, micronutrient supplements (especially vitamin A, iron and folic acid) should be given.
13. It must be kept in mind, that adolescents, adults and elderly persons may also be malnourished and should be included in Selective Feeding Programmes.
14. The effectiveness of Selective Feeding Programmes, and their impact on mortality and morbidity of affected populations, should be monitored regularly.
15. The need to set up Selective Feeding Programmes after the initial stage of an emergency often represents a serious warning that the assistance as a whole is insufficient.
16. For interpretation of nutrition surveys, results are presented both in weight-for-height Z-scores and percentage of the median. However, during admission and discharge to feeding programmes, percentage of the median is often being used. At present, no consensus has yet been reached on the use of Z-score in feeding programmes.
17. The standards mentioned in these guidelines meet the set of minimum standards in disaster response as mentioned in the Sphere Project (4).

Figure 1: Conceptual Framework of Malnutrition*



* Source: UNICEF, 1997.

III. FEEDING PROGRAMME STRATEGY

18. There are two mechanisms through which food may be provided:

- **General Food Distribution**
- **Selective Feeding Programmes.**

19. **General Food Distribution** provides a standard general ration to the affected population with the aim to cover food and nutritional needs (5,6) .

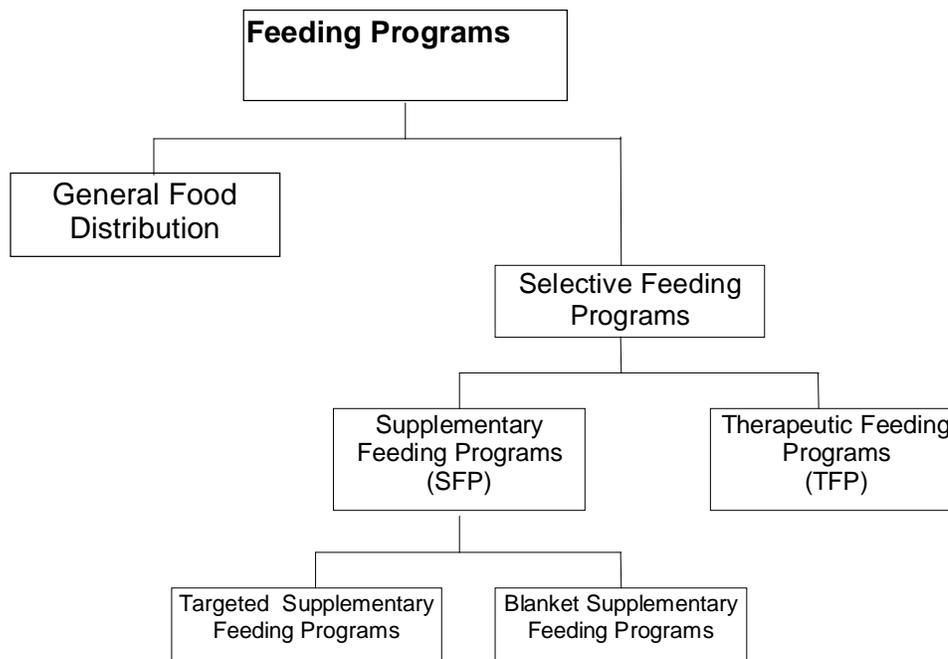
20. There are two forms of Selective Feeding Programmes:

- **Supplementary Feeding Programmes**
- **Therapeutic Feeding Programmes**

21. **Supplementary Feeding Programmes (SFPs)** provide nutritious food in addition to the general ration. They aim to rehabilitate malnourished persons or to prevent a deterioration of nutritional status of those most at-risk by meeting their additional needs, focusing particularly on young children, pregnant women and nursing mothers.

22. SFPs are short-term measures and should not be seen as a means of compensating for an inadequate general food ration. The objectives of the feeding programme should be realistic and should be achieved within a period determined in advance. Figure 2 illustrates the different types of feeding programmes.

Figure 2: Feeding Programme Strategy



23. SFPs comprise two different types:
- **Targeted SFPs:** The main aim of a Targeted SFP is to prevent the moderately malnourished becoming severely malnourished and to rehabilitate them. These types of programmes usually provide a food supplement to the general ration for mild and moderately malnourished¹ individuals and for selected pregnant and nursing mothers and other nutritionally individuals at-risk.
 - **Blanket SFPs:** The main aim of a blanket SFP is to prevent widespread malnutrition and to reduce excess mortality among those at-risk by providing a food/micronutrient supplement for all members of the group (e.g. children under five or under three, pregnant women and nursing mothers, etc.).
24. Supplementary food can be distributed in two ways:
- **On-site feeding or wet ration:** The daily distribution of cooked food/meals at feeding centres. The number of meals provided can vary in specific situations, but a minimum of two or three meals should be provided per day.
 - **Take-home or ration:** The regular (weekly or bi-weekly) distribution of food in dry form to be prepared at home. It may be necessary to increase the amount of food to compensate for intra-household sharing.
25. It is generally accepted that take-home rations should always be considered first as such programmes require fewer resources and there is no evidence to show whether on-site SFPs are more effective. Other advantages of **dry ration** feeding are that it:
- carries less risk of cross-infection as large numbers of malnourished and sick children do not have to sit in close proximity while feeding.
 - takes less time to establish than on-site feeding programmes which require setting up and equipping centres.
 - is less time consuming for mothers who only have to attend every week or fortnight and as a result leads to better coverage and lower default rates.
 - keeps responsibility for feeding within the family.
 - is particularly appropriate for dispersed populations many of whom would have to travel long distances to attend daily.
- On-site** feeding may be justified when:
- food supply in the household is limited so it is likely that the take home ration will be shared with other family members.
 - firewood and cooking utensils are in short supply and it is difficult to prepare meals in the household.
 - the security situation is poor and beneficiaries are at-risk when returning home carrying weekly supplies of food.
26. **Therapeutic Feeding Programmes (TFPs)** are to rehabilitate severely malnourished persons. The main aim is to reduce excess mortality. In most emergency situations, the majority of those with severe wasting² are young children. There have, however, been cases where large numbers of adolescents and adults have become wasted. In such situations, separate TFP facilities may be established for these groups.

¹ those with a weight and height that is between minus three and minus two standard deviations (between -3 and -2 Z-scores) or between 70% and 80% from the median weight-for-height as compared to the reference population.

² reflects severe malnutrition: weight and height that is below minus three standard deviations (<-3 Z-scores) or below 70% from the median weight-for-height as compared to the reference population and/or oedema.

IV. SUPPLEMENTARY FEEDING PROGRAMMES

TARGETED SUPPLEMENTARY FEEDING PROGRAMMES

Objective

27. Targeted Supplementary Feeding Programmes (SFPs) are directed at **selected individuals who are at risk**. Their aim is to:

- rehabilitate moderately malnourished children, adolescents, adults and elderly persons.
- prevent the moderately malnourished from becoming severely malnourished.
- Reduce mortality and morbidity risk in children under 5 years.
- provide a food supplement to selected pregnant and nursing mothers and other individuals at risk.
- Provide follow-up to referrals from Therapeutic Feeding Programmes

Figure 3 explains the decision making framework concerning the implementation of Selective Feeding Programmes.

When to Start?

28. Targeted SFPs should be implemented when one or more of the following situations occur:

- There are large numbers of malnourished individuals $\hat{=}$ prevalence of **10-14%** acute malnutrition³ among children.
- There are large numbers of children predicted to become malnourished due to factors like poor food security and high rates of disease $\hat{=}$ prevalence of **5-9%** acute malnutrition in presence of aggravating factors⁴.

Criteria for Admission

29. The following target groups could be considered for admission to a Targeted SFP:

- Moderately malnourished children under 5 years:
 - between 70% and 80% of the median weight-for-height or
 - between -3 and -2 Z-scores weight-for-height
- Malnourished individuals (based on weight-for-height, Body Mass Index (BMI)⁵, Mid Upper Arm Circumference (MUAC)⁶ or clinical signs):
 - older children (between 5 and 10 years)
 - adolescents
 - adults and elderly persons
 - medical referrals
- Referrals from a Therapeutic Feeding Programme.
- Selected pregnant women (from date of confirmation of pregnancy) and nursing mothers (until 6 months after delivery), for instance using MUAC<22 cm as a cut-off indicator for pregnant women.

Criteria for Discharge

30. The following are the criteria for discharge:

- Children who have maintained at least 85% of median weight-for-height for a period of two weeks (wet SFP) or one month (dry SFP).
- Individuals older than 5 years who have attained a stable and satisfactory nutritional status and who are free from disease.

31. Children and adults who have not shown signs of improvement after two weeks (wet SFP) or one month (dry SFP) should be assessed to find out the cause and if required should be referred for medical and community care.

³ Prevalence of acute malnutrition (or: acute malnutrition rate) reflects the proportion of the child population (6 months to 5 years) whose weight-for-height is below -2 Z-scores or less than 80% of the median NCHS/WHO reference values, and/or oedema.

⁴ Aggravating factors are normally defined as inadequate general food ration, crude mortality rate above 1/10,000/day, epidemics measles or whooping cough, and high prevalence of respiratory or diarrhoeal diseases.

⁵ BMI: Body Mass Index defined as the (weight in kg)/(height in m)² for assessing the nutritional status of adolescents and adults.

⁶ MUAC: Circumference of the mid upper arm, used for rapid screening of children.

When to Close?

32. Targeted SFPs can be closed when all of the following criteria are satisfied:
- General food distribution is adequate (meeting planned nutritional requirements).
 - Prevalence of acute malnutrition is below **10%** without aggravating factors.
 - Control measures for infectious diseases are effective.
 - Deterioration in nutritional situation is not anticipated.
 - In some situations where prevalence of acute malnutrition is below 5% (in presence of aggravating factors) or 10% (with no aggravating factors) but the absolute number of malnourished children may still be considerable, the closure of Targeted SFP may not be appropriate. The same may apply in unstable and insecure situations, where these programmes may be maintained as a 'safety net'.

Remarks

It is essential to integrate Targeted SFPs with community health services from the onset of the emergency in order to facilitate the referral to these services for medical reasons. Also where the number of beneficiaries has become small, it may be more efficient to manage the beneficiaries through community health facilities. In the absence of Targeted SFPs, individual attention should always be given to malnourished children through other community health services.

BLANKET SUPPLEMENTARY FEEDING PROGRAMMES

Objective

33. Blanket Supplementary Feeding Programmes are aimed primarily to prevent a deterioration in the nutritional status of the population, but also to reduce the prevalence of acute malnutrition in children under 5 years thereby reducing the mortality and morbidity risk. They are meant to provide a food/micronutrient supplement for **all members of groups at high risk of becoming malnourished**.

34. When an adequate general ration is being effectively distributed, there is normally no need for Blanket SFPs. However, this may be done exceptionally when nutritional needs are not met by the general ration or other ways.

When to Start?

35. Blanket SFPs may be set up under one or a combination of the following circumstances:
- At the onset of an emergency when general food distribution systems are not adequately in place.
 - Problems in delivering/distributing the general ration.
 - Prevalence of acute malnutrition equal or greater than **15%**.
 - Prevalence of **10-14%** acute malnutrition in presence of aggravating factors.
 - Anticipated increase in rates of malnutrition due to seasonally induced epidemics.
 - In case of micronutrient deficiency outbreaks, to provide micronutrient-rich food to the target population.

Criteria for admission

36. The primary target groups for Blanket SFPs are:
- All children younger than 5 or 3 years using height as a cut-off point (5 years = 110 cm; 3 years = 90 cm).
 - Pregnant women from the time of confirmed pregnancy, and nursing mothers until maximum 6 months after delivery.
 - Other at-risk groups (for instance sick and elderly persons).

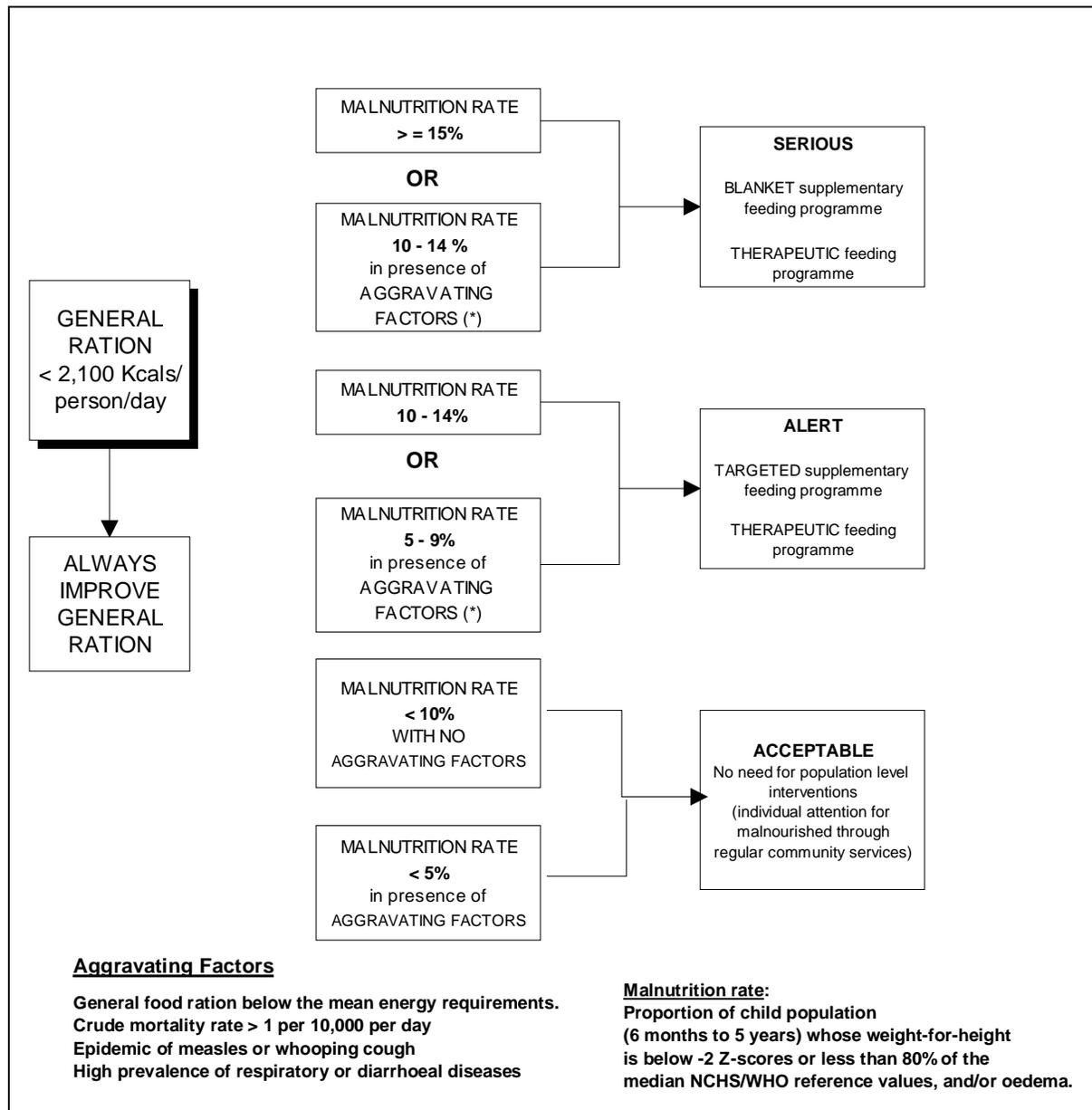
When to Close?

37. Blanket SFPs can be closed when all following conditions are met:
- General food distribution is adequate and is meeting planned minimum nutritional requirements.
 - Prevalence of acute malnutrition is below **15%** without aggravating factors.
 - Prevalence of acute malnutrition is below **10%** in presence of aggravating factors.
 - Disease control measures are effective.

Remarks

Normally a maximum time limit of 3 months is envisaged for a blanket SFP because it is anticipated that by this time the situation will have improved (adequate food, epidemics are under control, and safe and sufficient water). The nutritional status of the population should be reviewed (e.g. through a nutrition survey) at this time.

Figure 3: Framework: Selective Feeding Programmes (Modified from: Nutrition Guidelines; MSF, 1995)



V. THERAPEUTIC FEEDING PROGRAMMES

Objective

38. The aim of Therapeutic Feeding Programmes (TFP) is to provide treatment to severely malnourished individuals to reduce the risk of excess mortality and morbidity. It consists of intensive medical and nutritional treatment.

When to Start?

39. The establishment of a TFP is justified when the number of severely malnourished individuals cannot be treated adequately in other facilities. The availability of trained health staff is a prerequisite for establishing TFPs.

Criteria for Admission

40. The following groups are considered for admission to a TFP:
- Children younger than 5 years (or less than 110 cm in height) who are severely malnourished (weight-for-height “less than -3 Z-scores” or “less than 70% of median”) and/or children with oedema⁷.
 - Severely malnourished children older than 5 years, adolescents and adults can be admitted based on available weight for height standards or presence of oedema.
 - Low birth weight (LBW)⁸ babies.
 - Orphans younger than one year (only when traditional care practices are inadequate)
 - Mothers of children younger than one year with breastfeeding failure (only in exceptional cases where re-lactation through counselling and traditional alternative feeding have failed)

Criteria for Discharge

41. The common procedure is to refer a child to a targeted SFP when he/she:
- Maintains a weight-for-height “ \geq 75% of the reference median” or “ \geq -2.5 Z-score” for two consecutive weeks.
 - Shows a good appetite and is free of illness.

When to Close?

42. If the number of patients in TFP is decreasing (for example when the number drops below 20) and adequate medical and nutritional treatment in either a clinic or a hospital is available for all severely malnourished patients, it may not be justifiable to continue TFP.

Nutritional Rehabilitation

43. Nutritional rehabilitation for patients with severe malnutrition must include intensive medical and nutritional care (7,8):

- Phase 1: *Acute phase (intensive care)*. In 24-hour inpatient intensive care, medical treatment is started to control infection and dehydration, thereby reducing the mortality risk. Electrolyte balance is restored and nutritional treatment is initiated. Very frequent feeds with therapeutic milk⁹ (10-12 per day) are essential to prevent death from hypoglycaemia¹⁰ and hypothermia¹¹. This phase should not be extended beyond one week because of the limited energy content of the diet.
- Phase 2: *Rehabilitation phase*. The nutritional rehabilitation is started by providing at least 6 meals per day in order to regain most of the weight loss. Psychological and medical care is vital, the mother must be involved throughout the process and trained to continue care at home, and preparations are made for discharge of the child to a Targeted SFP. This phase is not expected to last more than five weeks.

44. The total duration of stay in a TFP should not exceed six weeks. If the child does gain weight during this period the implementation of the feeding regime should be reviewed. If this is not the

⁷ Accumulation of fluid in inter-cellular spaces of the body related to a deficiency in the diet

⁸ Liveborn babies with a birth weight less than 2500 g reflecting inadequate nutrition and ill health of the mother

⁹ Special milk for treatment and rehabilitation of severely malnutrition, also known as F-100

¹⁰ An extreme low blood sugar level, common cause of death among severely malnourished children during the first 2 days of treatment. It is caused by a serious infection or when a malnourished child has not been fed for 4-6 hours

¹¹ An extreme low body temperature, occurring usually together with hypoglycaemia among severely malnourished children and forms a common cause of death.

reason for weight gain, there may be other underlying causes i.e. medical/social issues (HIV-AIDS, tuberculosis, lack of care, etc.) which should be addressed accordingly.

45. Table 1 summarises the types, objectives and criteria of Selective Feeding Programmes and Figure 4 illustrates the criteria for admission and discharge.

Figure 4: Admission and Discharge Criteria (Modified from: Nutrition Guidelines; MSF, 1995)

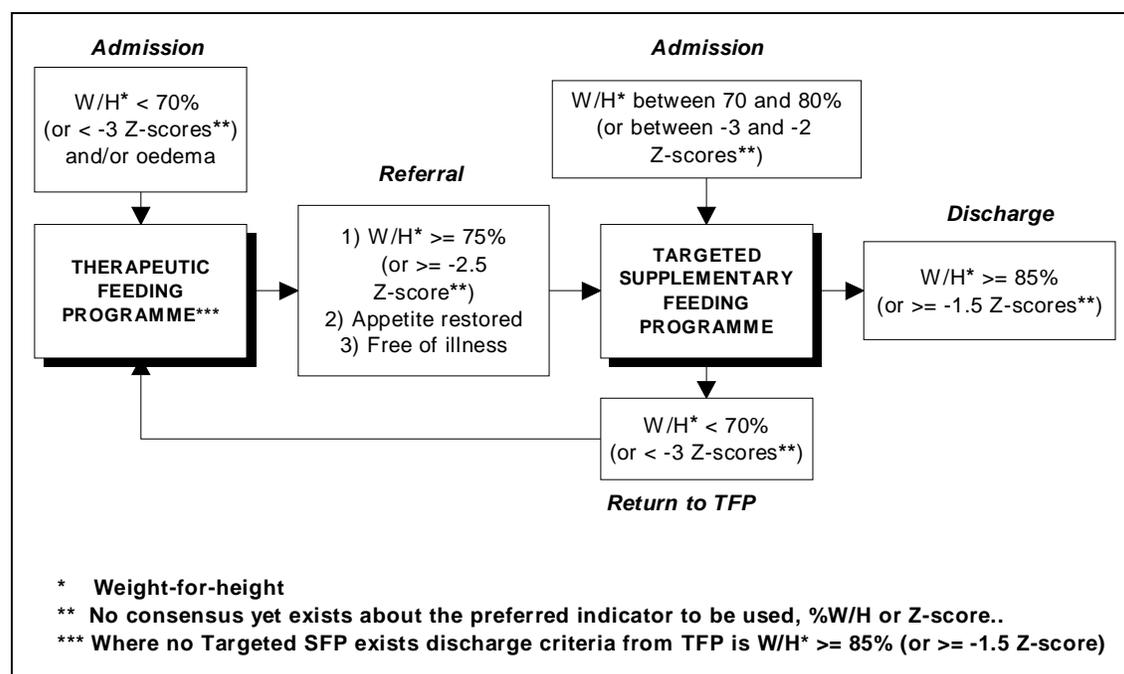


Table 1: Types of Selective Feeding Programmes

Program	Objectives	Criteria for selection and target group
Targeted SFP	<ul style="list-style-type: none"> • Correct moderate malnutrition. • Prevent moderately malnourished from becoming severely malnourished • Reduce mortality and morbidity risk in children under 5 years • Provide nutritional support to selected pregnant women and nursing mothers. • Provide follow up services to those discharged from therapeutic feeding programs 	<ul style="list-style-type: none"> • Children under 5 years moderately malnourished: <ul style="list-style-type: none"> → between 70% and 80% of the median weight-for-height or: → between -3 and -2 Z-scores weight-for-height • Malnourished individuals (based on weight-for-height, BMI, MUAC or clinical signs): <ul style="list-style-type: none"> → older children (between 5 and 10 years) → adolescents → adults and elderly persons → medical referrals • Selected pregnant women (from date of confirmed pregnancy) and nursing mothers (until 6 months after delivery), for instance using MUAC < 22 cm as a cut-off indicator for pregnant women • Referrals from TFP • Children under 3 or under 5 years • All pregnant women (from date of confirmed pregnancy) and nursing mothers (until maximum 6 months after delivery) • Other at-risk groups
Blanket SFP	<ul style="list-style-type: none"> • Prevent deterioration of nutritional situation. • Reduce prevalence of acute malnutrition in children under 5 years • Ensure safety net measures • Reduce mortality and morbidity risk 	<ul style="list-style-type: none"> • Children under 5 years severely malnourished: <ul style="list-style-type: none"> → < 70% of the median weight-for-height and/or oedema or: → < -3 Z-scores weight-for-height and/or oedema • Severely malnourished children older than 5 years, adolescents and adults admitted based on available weight for height standards or presence of oedema. • Low Birth Weight babies
TFP	<ul style="list-style-type: none"> • Reduce excess mortality and morbidity risk in children under 5 years • Provide medical/nutritional treatment for the severely malnourished 	

VI. MONITORING AND EVALUATION

Supplementary Feeding Programs

46. Ongoing monitoring should include collection of data to analyse the efficiency and effectiveness of Selective Feeding Programmes, in accordance with the objectives. This can be done through nutrition monitoring (surveys, growth monitoring) and the regular collection of feeding center statistics. Indicators are illustrated in Table 2 and forms for monthly reporting on SFPs are attached in Annex 2.

Table 2: Indicators for Monitoring Supplementary Feeding Programs

SFP Indicators	Acceptable (%)	Alarming (%)
Recovery rate	>70	<50
Death rate	<3	>10
Defaulting rate	<15	>30

Therapeutic Feeding Programs

47. Monitoring of TFPs includes the regular collection of feeding center statistics (Table 3) as well as regular surveillance to ensure compliance with therapeutic protocols for the provision of nutrition and medical care. Specific forms for monthly reporting on TFPs are attached in Annex 3.

Table 3: Indicators for Monitoring Therapeutic Feeding Programs

TFP Indicators	Acceptable (%)	Alarming (%)
Recovery rate	> 75	< 50
Death rate	< 10	> 15
Defaulter rate	< 15	> 25
Weight gain (g/kg/day)	>=8	<=8
Coverage	>50-70%	<40%
Mean length of stay	<3-4 weeks	>6 weeks

VII. FOOD COMMODITIES FOR FEEDING PROGRAMMES

SUPPLEMENTARY FEEDING PROGRAMMES

48. The size and type of the daily food supplement will depend on the adequacy of the general food supply situation, the malnutrition and mortality rate, and the feeding programme's modalities.

49. Food must be energy dense and rich in micronutrients, culturally appropriate, easily digestible and palatable. Usually, a blended food¹², fortified with micronutrients such as Corn Soya Blend (CSB), Unimix, Famix is being used. In situations when cooking may not be feasible, ready to eat items, such as high-energy biscuits or locally made snacks, can be used. Provision of food commodities is carried out according to the Memorandum of Understanding (MOU) between WFP and UNHCR (6).

50. Energy density is an important feature of a suitable food for Supplementary Feeding Programmes. Energy-dense supplementary food must contain at least 100 kcal per 100 grams with at least 30% of the energy coming from fat (9). Unimix, Famix and CSB have a fat content of only 6%, and as a consequence approximately 10 grams of oil should be added to 100 grams blended food during preparation and be distributed as a dry pre-mix or cooked porridge.

51. It is recommended not to use either fresh milk or milkpowder in a take-home ration because of the discouraging effect it has on breastfeeding, the danger of incorrect reconstitution and bacterial contamination through use of unsafe water and unclean feeding utensils (3). Milkpowder can be distributed in dry form only when mixed with other commodities (cereal flour, sugar, oil).

52. **On-site feeding or wet ration** should provide from 500 to 700 kcals of energy per person per day, including 15 to 25 g of protein (Table 4, rations 3-7). The food commodities provided could include blended food, oil, sugar, cereals, high energy biscuits and pulses.

53. **Take-home or dry ration** should provide from 1,000 to 1,200 kcal per person per day and 35-45 g protein (Table 4, rations 1-2). Commodities include blended food, oil and sugar.

Table 4: Examples of Typical Daily Rations for SFPs (in grams per person per day)

Item	Take-home or dry ration		On-site feeding or wet ration				
	Ration 1	Ration 2	Ration 3	Ration 4	Ration 5	Ration 6	Ration 7
Blended food, fortified	250	200	100			125	100
Cereal					125		
High Energy Biscuits (HEB)				125			
Oil, fortified with vitamin A	25	20	15		20	10	10
Pulses			30		30		
Sugar	20	15				10	10
Salt, iodized			5				
Energy (Kcal)	1250	1000	620	560	700	605	510
Protein (g)	45	36	25	15	20	23	18
Fat % Kcal	30	30	30	30	28	26	29

¹² A blend, composed of pre-cooked cereals and legumes/soybeans, fortified with vitamins and minerals.

THERAPEUTIC FEEDING PROGRAMMES

54. The type of food used in the treatment of severe malnutrition is of paramount importance.
55. In the acute phase only milk-based diets are given to the patients. Therapeutic Milk (TM) is used for treatment of severely malnourished children. However, if TM is not available High Energy Milk¹³ could be used (8).
56. In the rehabilitation phase a cereal based porridge, made of blended food (fortified), oil and sugar is given in addition to the TM. Other foods including high-energy biscuits can also be given at this stage and local food items should gradually be introduced to bring the patient back to the family diet.
57. Orphans younger than one year and infants whose mothers cannot produce adequate breastmilk often become malnourished. Unless a wet nurse can be found, breastmilk substitutes are the only option. Commercial infant formulas are often neither available nor affordable. An alternative is a formula based on cow's milk, dried skim milk or dried whole milk as described in table 5 (8,10).

Table 5: Home-made substitutes for breast milk ^{a, b}

Type of milk	Cow's milk, boiled	Full-cream milk powder	Dried Skim Milk^c (DSM)
Ingredients			
Milk	125 ml	15 g	10 g
Water, boiled	75 ml	200 ml	200 ml
Sugar	15 g	15 g	15 g
Oil	-	-	5 g
Approximate value/100 ml			
Energy (kcal)	70	70	70
Protein (g)	4.1	3.9	3.6

^a Management of nutrition in major emergencies, WHO (in press) & Manual on Feeding Infants and Young Children, M. Cameron and Y. Hofvander, 1984

^b For infants up to six months of age, if no breast milk is available or when the breast milk supply is not enough. Average total volume needed per day is about 150 ml/kg. The ingredients given will make 200 ml.

^c At least fortified with vitamin A, if available supplemented with the vitamin/mineral mixes as described in 'Manual for Management of Severe Malnutrition: A Manual for Physicians and other Senior Health Workers; WHO (1999)'.

¹³ High Energy Milk is composed of Dried Skim Milk (DSM), oil and sugar, mixed and fortified with minerals and vitamins, used for the treatment of severe malnutrition.

VIII. MANAGEMENT ISSUES

58. For planning purposes, the food needs and facilities for the feeding centers need to be estimated (see example). When recent nutrition survey data and demographic data are available, the maximum expected number of beneficiaries can be calculated. If demographic information is not available, table 6 below can be used as an approximation.

59. In the absence of data on the prevalence of malnutrition, it can be anticipated that in a nutritional emergency, 15 - 20% may suffer from moderate malnutrition and that about 2 -3% might be severely malnourished. Using these estimates, requirements for the various food commodities can be calculated and planned for a period of time.

Example

- Population of the camp = 30,000.
- Estimated number under five years = 4,500-6,000 (15-20%).
- Estimated prevalence of moderate malnutrition (15%); number of moderately malnourished children = 675-900.
- Estimated prevalence of severe malnutrition (2%); number of severely malnourished children 90 - 120.

Table 6: Projected Demographic Breakdown

Group	% of the total population	Comments
under five years	15 - 20%	0 -59 months or < 110 cm
5 -14 years	25 - 30%	
Pregnant	1.5 - 3 %	
Nursing	3 - 5%	

Addressing Food Pipeline failures

In case a serious food pipeline failure disrupts the availability of one or more important commodities, the following measures are recommended:

1. Exercise all efforts to restore the food pipeline at the earliest opportunity
2. Replace food commodities that are not available by other food items in order to maintain the adequate energy and protein level of the food basket as described in Joint WFP/UNHCR Guidelines for Estimating Food and Nutritional Needs in Emergencies (5)
3. Decrease the distribution of the missing commodity (ies) in the General Ration
4. Safeguard the supplies to the Therapeutic Feeding Programme
5. Maintain the level of the commodity (ies) concerned in the Supplementary Feeding Rations with the following sequence of priority:
 - è children under 5 years of age
 - è pregnant women and nursing mothers
 - è older children
 - è other at-risk groups
6. In case of a prolonged food pipeline failure, the Supplementary Feeding Programme can be expanded to other at-risk groups depending on food availability

60. Feeding Centre organisation and staff requirements for a given population can be found in several guidelines (11,12,13,14).

61. For further details and technical advice, Nutritionists in the technical units in WFP and UNHCR-Headquarters can be contacted.

Annex 1: References

1. The Care Initiative: Assessment, Analysis and Action to Improve Care for Nutrition; UNICEF, April 1997.
2. A Framework for People-Oriented Planning in Refugee Situations taking Account of Women, Men and Children; UNHCR, December 1992.
3. Policy for Acceptance, Distribution and Use of Milk Products in Refugee Feeding Programmes; UNHCR, July 1989.
4. Humanitarian Charter and Minimum Standards in Disaster Response; The Sphere Project, 1998.
5. Joint WFP/UNHCR Guidelines for Estimating Food and Nutritional Needs in Emergencies (also in French), WFP/UNHCR, December 1997.
6. Memorandum of Understanding on the Joint Working Arrangements for Refugee, Returnee and Internally Displaced Persons Feeding Operations (also in French); WFP/UNHCR, March 1997.
7. Nutrition Guidelines; MSF, 1995.
8. Manual for Management of Severe Malnutrition: A Manual for Physicians and other Senior Health Workers; WHO (1999).
9. Fats and Oils in Human Nutrition; FAO Food and Nutrition Paper 57, FAO & WHO, 1993.
10. Manual on Feeding Infants and Young Children; M. Cameron and Y. Hofvander, Oxford University Press, 1983.
11. Good Practice Review 2, Emergency Supplementary Feeding Programmes, RNN 1997.
12. Selective Feeding Programmes, Lusty T. And Diskett P., OXFAM Practical Guide No. 1, OXFAM Health Unit, 1984.
13. Drought Relief in Ethiopia, Planning and Management of Feeding Programmes, A Practical Guide; SCF UK, 1987.
14. Food and Nutrition in the Management of Group Feeding Programmes, FAO Food and Nutrition Paper 23 Rev.1; FAO, 1993.

Annex 2: Reporting Form: Supplementary Feeding Programme

COUNTRY:
LOCATION:
AGENCY:

PERIOD:

TOTAL POPULATION:
UNDER (<) 5 POPULATION:
MODERATE MALNUTRITION RATE:
TARGET < 5 (MODERATE MALNUTRITION RATE * < 5 POP.):
THEORETICAL COVERAGE < 5 (NEW TOTAL (J)/TARGET):

	CATEGORIES					TOTAL
	<5 years		>=5 years		Pregnant women	
	M	F	M	F		
Total at end last month (A)						
New Admissions:						
<80% WFH or <-2 Z-score						
Others						
Total New Admissions (B)						
Re-admissions (C)						
Total Admissions (D=B+C)						
Discharged in this Period :						percentage for <5 yrs (target):
Discharges (E)						E/I * 100%= (> 70%)
Deaths (F)						F/I * 100%= (< 3%)
Defaulters (G)						G/I * 100%= (< 15%)
Referrals (H)						
Total Discharged (I=E+F+G+H)						
New Total at end this month (J=A+D-I)						

Average length of stay in the program (from all or a sample of 30 recovered children) (target <60 days) =

$$\frac{\text{Total No of days of admission of all (or 30) recovered children}}{\text{No of recovered children (or 30)}}$$

Comments:

Annex 3: Reporting Form: Therapeutic Feeding Programme

COUNTRY:
LOCATION:
AGENCY:

PERIOD:

TOTAL POPULATION:
UNDER (<) 5 POPULATION:
SEVERE MALNUTRITION RATE:
TARGET < 5 (SEVERE MALNUTRITION RATE * < 5 POP.):
THEORETICAL COVERAGE < 5 (NEW TOTAL (J)/TARGET):

	CATEGORIES						Total
	<5 years		>=5 years		Adults		
	M	F	M	F	M	F	
Total at end of last month (A)							
New Admissions:							
<70% WFH or: <-3 Z-score Kwashiorkor							
Others							
Total New Admissions (B)							
Re-admissions (C)							
Total Admissions (D=B+C)							
Discharged this month:							percentage for <5 yrs (target):
Discharged (E)							E/I * 100%=
Deaths (F)							(>75%) F/I * 100%=
Defaulters (G)							(<10%) G/I * 100%=
Referrals (H)							(<15%)
Total Discharged (I=E+F+G+H)							
New Total at end of this month (J=A+D-I)							

Causes of death:

Average weight gain during last month (from all or a sample of 30 children) (target: >8 g/kg/day) =

$$\frac{\text{weight at end of month (or on exit) - lowest weight recorded during month}}{\text{lowest weight recorded in last month} \times \text{No of days between lowest weight recorded and end of month (or on exit)}}$$

Average weight gain for **marasmus** (include only children in phase II) =

Average weight gain for **kwashiorkor** (include only children in phase II after complete loss of oedema) =

Average length of stay in the program (from all or a sample of 30 recovered children) (target <30 days) =

$$\frac{\text{Total No of days of admission of all (or 30) recovered children}}{\text{No of recovered children (or 30)}}$$

Comments: