

ISSUES PAPER; UNHCR EMERGENCY PREPAREDNESS.

Section I: BASIC RATIONS.

1. What is meant by the term "basic rations"?

In refugee situations where the camp population has access to cooking fuel and utensils, the most satisfactory way of meeting the refugees' nutritional needs is to distribute basic food rations on a periodic basis. Most foods are weighed out in dry form, although canned or individually packaged foods would be counted out by units. The basic ration distribution requires strict organization to prevent inconvenience to the refugees, food wastage and abuses. Through the distribution of basic rations, the refugees' normal family life remains uninterrupted through their retention of control over their own meals.

2. What is meant by the term "food basket"?

The combination of components of the basic ration, anything from 4 to 12 basic foodstuffs, is known as the food basket. The nutritional calculations necessary to arrive at a suitable combination of foodstuffs that will provide an adequate diet in quantity and quality are based on the nutritional composition of each individual component. The combination should be maintained precisely; modifications in the food basket that alter the quantity and quality of the refugees' diet must be examined carefully by qualified personnel.

3. Who normally provides the basic ration?

The basic ration is usually provided in bulk for emergency food aid situations by the World Food Programme (WFP) of the Food and Agriculture Organization in Rome. At the national level, the food may be delivered directly by WFP or handed over to a government or international voluntary agency to distribute to the refugee camps. In certain cases, WFP will ask another organization to provide food on its behalf, such as Food for Peace, USA, or the European Economic Community, Brussels.

4. How is the food provided to the refugees?

Basic rations should be provided to the refugees in bulk, dry form. It is most advantageous to supply at each distribution food for not less than 7 days and not more than 15 days, calculating the foods for one family at a time. Distributions should be conducted by camp section, on previously announced dates, in an orderly and equitable fashion.

5. How are the food requirements estimated?

Daily ration composition must provide the following nutrients to every member of the refugee population:

- 50 g. protein/person/day
- 2100 Kcals./person/day
- 2500 I.U. (750 mg.) Vitamin A/person/day
- 30 mg. Vitamin C/person/day
- 20 mg. Iron/person/day

Under the supervision of a nutritionist, a diet is designed which will supply these nutrients in these amounts and that ration is then multiplied by the total number of the camp population.

6. What are some of the common problems in basic rations?

Common problems in basic ration distribution are:

- rations unequally distributed by section leaders
- portions withheld as a means of control by certain groups
- portions withheld for resale via black markets
- women and children deprived of their portions by working males
- unforeseen temporary shortages due to delivery failure or transport problems
- accidental losses
- portions may be spoiled (rotten).

7. How can you tell if the refugees are not getting enough food?

Inadequacies in the quantity and quality of basic rations show up most quickly in the vulnerable groups, i.e. children 5 years of age and under, and pregnant and lactating women. Nutritional surveillance will reveal food inadequacies in this group, but also early signs (extra appetite, larger portions requested) may be revealed during supplementary feeding activities.

8. How can you monitor the food distribution programme?

The food distribution programme is monitored at the point of distribution through the use of ration cards (one per family) and the section leaders' daily reports of supplies distributed.

9. How can you monitor the logistics?

Section II: SUPPLEMENTARY FEEDING.

11. What is a supplementary feeding programme?

A supplementary feeding programme (SFP) is a community service, and part of the preventive health programme. The objectives of an SFP are to protect vulnerable groups, ensure that an additional meal is fed daily to those vulnerable groups, to aid recovery from disease and to educate refugees in better nutrition practices.

12. Why is it considered the key feeding operation?

An SFP is the means by which inequities in the basic rations are smothered-out in order protect the most vulnerable groups.

13. Why can't you just increase the ration to insure people get enough good quality food?

In theory, it might be possible to double or even triple the basic ration for members of the vulnerable groups. In practice, this would still be no guarantee that the additional food would actually reach those persons. Vulnerable groups constitute for the most part those persons who would be least able to protect themselves against inequitable intra-familial meal distribution and other abuses, intentional or unintentional.

14. What other functions or services are linked to the SFP?

In all cases, it is appropriate to attach preventive health activities to the SFP. These activities include home visiting, under-5s clinic (where nutritional surveillance and immunization programmes are carried out), an advisory room, public health education and mass distribution of medicines. This broad range of preventive health activities is run in close collaboration with the out-patient department (OPD) and the public health personnel in the refugee camp.



15. How is an SFP organized?

SFP beneficiaries are registered individually with a card system and are fed a cooked meal at least once a day. Sit-down feeding activities are closely supervised in the SFP Centre, which should cater for not more than 3,000 beneficiaries. The importance of hygiene in the facility kitchen and in the sheltered area where the refugees sit cannot be overemphasized.

16. Who normally conducts an SFP?

In terms of day-to-day routines, an SFP is administered by a competent voluntary agency under the coordination of UNHCR.

17. How can UNHCR ensure that all refugees receive a basic minimum level of service in the SFPs?

Periodic inspections of all aspects of an SFP Center operation will be carried out by the Camp Feeding Programme Coordinators. Through this comprehensive supervisory activity, inspections of hygiene conditions, record-keeping and surveillance statistics should be routinely undertaken.

18. What is meant by the term "vulnerable groups"?

A vulnerable group is that sub-group of the refugee camp population that is capable of withstanding nutritional stress, i.e. diminished food quantity or quality, for only a relatively short length of time. These groups include children 5 years of age and under and pregnant and lactating women. Their nutritional needs are greater than those of youths or adults since their bodies require additional quantities of certain nutrients for growth or for milk production.

19. Why is caution urged in the provision of milk and especially milk-powder?

The use of milk is appropriate in most populations, but with certain groups under certain conditions caution should be exercised. In populations unused to drinking milk after weaning, lactose intolerance may develop both in children and adults. This is due to the disappearance of an enzyme, lactase, which is responsible for lactose digestion. Diarrhoea may result after drinking milk in affected individuals, and should therefore be avoided. milk powder is subject to problems of lack of hygiene, in its preparation (with dirty water) or in its delivery (in dirty receptacles, especially feeding bottles). Only under supervised hygienic conditions is it appropriate to utilize products like DSM. The milk itself, however, causes no ill effects directly.

20. What are the high protein synthetic foods and when should they be used?

Over recent years, blends of vegetable foods have been introduced in refugee feeding programs which are designed, through protein complementation, to have protein quantities and qualities closer to those found in animal products. Corn-soya-milk (CSM), wheat-soya-blend (WSB), soy-fortified rolled oats (SFRO), soy-fortified corn meal (SFCM), SEF, Semper I, Incaparina, and many others have now been developed and field tested. Such products, to which the camp populations would not be accustomed, are suitable only for SFP activities and not basic ration distributions.

21. What is the ideal size for an SFP?

Ideally, a SFP should cater to no more than 3,000 persons. Larger operations than this tend to become hectic and disorganized, and the quality of the associated preventive health activities and of the supervision of the actual feeding tend to drop off.

22. How many staff are normally required to run an SFP?

That's hard to answer; see de Ville de Goyet, pp. 44-48. You need cooks, assistants, cleaners, supervisors (to watch the people eating), and so on.

23. Do these programs require a large input of expatriates?

At the outset, expatriate staff may be required to set SFPs in motion but after they are operating, and the supervisory inspection system has been established satisfactorily, expatriate staff can easily withdraw.

24. What facilities are required?

A large dry, sheltered space is required where the beneficiaries of the SFP will sit and eat. Cooking facilities include a kitchen area which can be maintained under hygienic conditions, stoves, fuel, utensils, water supply, drainage, garbage disposal, a secure foodstore and space to undertake the preventive health activities associated with the SFP.

25. What are some common problems to look for?

Supervision reveals certain problems from time to time; an SFP is a large, complex, almost continuous flow-through system which is subject to flow problems and diminished food quantity and quality if close monitoring is not kept up throughout the operation. Lack of hygiene in the kitchen and the food distribution, point is probably the most common difficulty encountered.

### Section III: INTENSIVE FEEDING.

26. What is intensive feeding?

Intensive feeding programs (FPs) are established in refugee camps, where necessary, to reduce mortality among infants and children with severe protein-energy malnutrition (PEM).

27. What is the difference between intensive and therapeutic feeding?

This is simply a question of semantics. The older literature used the term "therapeutic" from the point of view that feeding cases of severe PEM was part of the curative therapy, which it is. The modern literature uses the term "intensive feeding, so as to distinguish this form of nutritional programme from the more infrequent and medically less closely supervised feeding activities such as the SFP. For the sake of standardization in the field, it is recommended that the term "intensive feeding" be generally adopted now.

28. How do intensive and supplementary feeding programmes differ?

In essence, an SFP is an ambulatory feeding activity to which the recipients come one or more times per day from their homes to the SFP Centre. An IFP is an in-patient feeding activity in which the recipients are under intensive care for their nutritional recuperation.

29. Why is an IFP considered a "medical" and "pediatric" program?

An IFP requires greater concentrations of medical and pediatric resources in terms of personnel, equipment and supplies, and therefore bears more of a resemblance to a medical or pediatric operation than a feeding programme.

30. Who normally conducts an IFP?

An IFP is administered by a competent voluntary agency under the coordination of UNHCR.

31. When is an IFP required?

When sufficient numbers of cases of severe PEM are present in the camp to the extent that they cannot be adequately handled by the SFP (which has the capacity to recuperate all moderate cases of PEM), an IFP should be established.

With adequate programmes, an IFP should be required for no more than about 3 months, after which time all existing cases should have recuperated, unless new arrivals continue to present with severe PEM.

32. Where should an IFP be set up?

An IFP should only be set up in a transit (reception) camp where new arrivals are received. No case of PEM should be transferred to a regular refugee camp until after recuperation through the IFP is completed.

33. What facilities are required?

The IFP Center should be a relatively large operation contained in 2 or 3 buildings separate from but close to the pediatric ward of the camp hospital. One of the buildings should house adequate medical facilities with which to treat newly admitted severe cases. The kitchen in an IFP Centre would necessarily be somewhat more sophisticated than that used for an SFP. Various plans for such a Centre are available in the literature (see de Ville de Goyet et al. 1978, pp. 50-58).

34. How do you determine, and when, that an IFP is necessary?

35. How is an IFP organized and what kind of staff are required?

As an intensive medical operation, an IFP is organized around continuous high quality medical supervision during the nutritional recuperation of the severe cases of PEM. Day and night shifts work around the clock, providing feeds according to a pre-determined schedule that may be as frequent as every two hours during the day, every 4 hours during the night, depending on the age and nutritional status of the child involved. Personnel required for the operation include a doctor and nurses, cook, cleaners, attendants and helpers according to the size of the IFP Centre (i.e. the number of children therein).

36. What kinds of foods are used in an IFP?

Any food preparation can be used if containing no less than 20 g good-quality protein and 900 kcal/l; 20-40% of the calorie intake should be provided by oil. Sugar can be partly replaced by thoroughly cooked, dried, and finely pounded cereals. Oil provides "compact" calories (9 kcal/g). Between 40 and 60 g can be used for one litre of liquid food. Red palm oil is rich in provitamin A but does not mix well. Depending on the local climate and the quality of the oil, a dry mixture (oil included) can be prepared several days in advance. Liquid preparations must not be kept for more than 6 hours.

37. How can UNHCR ensure that a basic minimum standard is maintained in an IFP?

See question no. 17. I assume that routine periodic supervisory visits by UNHCR personnel will be undertaken, but the standards are not clear on this point; see p. 12 of the relevant section of the Standards Manual.

38. What are some of the common problems to look for in the operation of an IFP?

As in question no. 25, in such a complex operation, supervisory visits can potentially reveal short-comings in hygiene, food quantity and quality and so on. Caution should be exercised when criticizing the medical activities, since doctors tend to regard this as an attack on their professional competence! The case fatality rate (% risk of mortality for each case) in an individual IFP may be, but is not necessarily, a useful performance indicator in an IFP.

#### Section IV: HEALTH PROGRAMMES

39. What are the two types of health programmes and which is more important?

Curative health refers to medical activities undertaken to remedy illness which already exists; preventive health involves environmental, nutritional and personal

hygiene measures undertaken to prevent the occurrence or spread of disease. Most of the diseases found in refugee camps in Third World countries are preventable if appropriate action is taken, and a preventive health programme is therefore the more valuable long-term intervention.

40. What is meant by public health surveillance and how does it work?

Public health surveillance is the monitoring of the frequency and distribution of diseases in a community. This is achieved by the collection of statistics on the number of cases of various diseases and deaths occurring in specified time periods, and the analysis of these statistics to discover trends in mortality, morbidity and case fatality rates. On the basis of these findings, appropriate public health action can be taken. Note on terminology:

(a) Mortality rate is normally expressed as the number of deaths per thousand population per year.

(b) Morbidity rate is normally expressed as the number of cases of a disease per thousand population per year.

(c) Case fatality rate is normally expressed as the number of deaths from a particular disease per thousand cases of that disease per year.

(d) Incidence rate is normally expressed as the number of new cases of a disease occurring per thousand population during a specified time period (one week, month, year, etc.)

(e) Prevalence rate is normally expressed as the total number of existing cases of a disease existing per thousand population at a particular point in time.

41. What types of medical programmes are effective/appropriate to an emergency?

Curative health programmes predominate in emergency situations because there are cases of disease and injury to deal with immediately and little time. Doctors and nurses are vital health personnel in emergencies.

42. How does this change after a situation becomes more stable?

After the immediate curative health needs of a population are met, i.e. the treatment of wounded and sick following a disaster, preventive health programmes should receive greater emphasis. There is time to institute nutritional and public health surveillance, sanitation, immunization and public health education programmes. Auxiliary paraprofessional (extensionist) health personnel become more crucial to the operation as the situation stabilizes.

43. What are the most common health problems (and diseases) in a refugee camp?

The most common health problems in a refugee camp are PEM and other nutritional disorders, such as Vitamin A deficiency; communicable diseases, including respiratory diseases, gastro-enteric diseases, and childhood diseases; and skin diseases.

44. What is the risk of epidemic in a refugee camp environment?

An epidemic is characterized by an increase, often sudden and explosive, in the number of cases of a particular disease over that normally to be expected in a given population. The risk of an epidemic of a particular disease depends on three elements: the presence of the disease (the agent), a susceptible population (the host) and conditions favorable to the transmission of the disease may be present, but susceptible hosts may be spread out over a large area in isolated dwellings. While environmental sanitation may be poor, its effects will be limited to maintaining a low background rate of morbidity. On a refugee camp, large numbers of susceptibles will be concentrated together for the first time, and environmental pre-conditions will become favorable to transmission (through person-to-person contact, by water, via a vector, or the fecal-oral route) at an epidemic level.



45. How likely is it that an epidemic in a camp would spread outside a camp to surrounding villages?

For epidemic levels of a disease to exist in a refugee camp, conditions must be favorable for transmission, as described in section 44. If there is then frequent contact between the camp and nearby villages, and there are susceptibles in those villages, the epidemic is likely to spread.

46. What kind of medical facilities and equipment are required in a refugee camp?

(a) Simple field hospital facilities for regular refugee camps.

(b) Medical facilities as in (a) plus facilities necessary to run an IFP in transit (reception) camps.

See the relevant WHO publications on this topic and consult professional health personnel.

47. Are mobile medical teams effective?

Mobile teams are not useful since it is rare that great distances have to be traversed within a single camp. Each camp with a population over 1,000 should have its own permanent medical facility, however simple.

48. Should people from outside the camp receive treatment inside the camp?

Only in emergency or epidemic situations, or where political or social factors make their refusal undesirable, should people from outside camps be treated at camp facilities.

49. Who normally provides health services?

Health services are administered by a competent voluntary agency co-ordinated by UNHCR.

50. How can the effectiveness of a medical program be checked?

By the careful collection and analysis of morbidity and mortality figures, a medical program may be evaluated. These figures may serve as performance indicators to construct rates to be compared over time.

51. What is PHE, and why is it necessary?

PHE is basic instruction in hygiene and simple preventive health measures to be taken to achieve personal health and cleanliness. PHE may be conducted at the public meeting, home or school level. While the creation of an awareness of preventive health measures is desirable in any population, it is especially important in refugee camps, where people may be closely packed together, to aid in the prevention of the spread of disease.

52. What subjects are covered?

PHE subjects may include personal cleanliness, nutrition education, food preparation, proper disposal of garbage, sanitation habits, child care, immunizations, and vector control.

53. How effective is PHE?

If undertaken in a manner appropriate to the target group, PHE can be a very effective preventive health measure.

54. What is required for a PHE?

The most important requirement of an effective PHE is motivated workers to impart the subjects to be covered in a culturally appropriate way. This will usually involve the training of selected refugees as public health workers by the UNHCR and voluntary agencies concerned. The public health workers will need a convenient place to impart classes, and some simple visual aids, such as a flannelgraph or blackboard.

55. Why is PHE considered a developmental rather than a relief programme?

The effects of PHE should be to produce long-lasting behavioural changes in the target population; thus, improved personal health habits should continue when the refugees have returned to a more normal home situation.

56. When should a PHE programme commence?

A PHE programme should begin as soon as is practicable after the establishment of a refugee camp, before undesirable personal health habits become established in the camp situation. In some cases, there will necessarily be a tolerable delay while workers are trained.

57. What are some of the common problems in PHE?

PHE may be less effective than desirable because of:

- poor worker selection
- inappropriate content or presentation of educational material
- economic or physical restraints on compliance with suggested measures (i.e. lack of water, or fuel to boil water).

58. Who normally conducts a PHE programme?

The organization of a PHE programme should be the responsibility of the UNHCR and the voluntary agencies involved, who should usually designate a Public Health Education Officer for the camp. The actual PHE activities should be undertaken by public health workers chosen from the refugee population and appropriately trained.

## Selected Articles on Emergency Operations

### Section IV. Medical

#### 18. Public Health Education

##### A. INTRODUCTION (UNHCR, 1980)

###### 1. Concept

Public Health Education is the process of creating an awareness of the special requirements for personal health and cleanliness and ways in which individuals can accomplish these objectives and contribute to the reduction of risks of disease in their daily family routines. The Education Programme must present information on a regular and timely basis about topics such as personal cleanliness, food preparation, proper disposal of garbage, sanitation habits, child care, preventive health, vector control and screening diseases. PHE is not a substitute for good site services such as sanitation, garbage collection, etc. yet neither can disease be effectively controlled without participation by the refugees.

To be effective, the information must be presented to almost every family in the camp. To accomplish this, a variety of presentation methods must be used: home visits, public meetings, visual reminders (such as posters) and others. A set of camp public health rules must be developed and presented to the refugees as part of the programme and self-enforcement of the rules by the families should be the clear goal of the programme.

Hopefully, the health education will become part of the refugees' pattern of daily life, such that upon their return to a normal situation good health practices will continue.

## 2. Target Group

While the goal of PHE programme is to inform all adults in the camp, the primary emphasis of the programme is presenting the information to women. In most (but not all) cultures, women are responsible for sanitation and hygiene related activities in family life. She is responsible for storage of food, preparation of the meals and disposal of the wastes; she takes care of the children and cleans up after them; she is responsible for cleaning the shelter and washing the clothes. Thus, the woman becomes the principal control factor in public health.

As a second priority, children will also need public health information. With proper education the hygiene habits of the young can be modified at an early age and proper sanitation can become a way of life.

## 3. Objectives

The objectives of the Public Health Education Programme are:

- a) To train selected groups of refugees to become qualified and competent Community Health Workers who will in turn carry out the functions of the Public Health Education Programme to the general population.
- b) To develop community-based programmes where the services of the Community Health Workers will be used effectively.
- c) To encourage total participation, involvement and eventual management of the programme by the refugees.

## 4. Goals

The goals of the Public Health Education Programme are:

- a) To present informal courses on various public health topics on an individual basis to all adult women now residing in each group.
- b) To present an orientation on public health rules to all new arrivals over the age of 10 in the camp within 48 hours of their arrival.
- c) To present public health information on a routine basis to all school classes in each camp.

## B. GUIDELINES (UNHCR, 1980)

### 1. UNHCR Policy Statement

The Public Health Education Programme will be developed as a means for improving the basic quality of life, health and general welfare of the refugees. The programme will stress preventive control measures for a sanitary and disease-free environment, which is directly related to the quality of health. So often this fact is not fully understood and the result is a high incidence of disease caused by an unsanitary environment.

The Public Health Education Programme should communicate the preventive methods, routines and procedures for maintaining a healthy and disease-free camp environment.

It is UNHCR policy that emphasis is placed on involvement from the refugees in helping themselves to develop and manage the programme.

### 2. Topics

The Public Health Education Programme should be divided into activities, home visits to women, orientation of new arrivals, school presentations and public meetings.

a) Home visits to women should present information on the following subjects:

1. Sanitation
2. Proper disposal of cooking and meal wastes
3. Personal cleanliness and hygiene
4. Proper storage of food
5. Cleanliness in food preparation
6. Child care and childhood diseases
7. Breast feeding vs use of bottles
8. Fly control
9. Environment related diseases
10. Cleaning the house and site
11. Nutrition
12. Pregnancy

- b) Orientation of new arrivals should include the following:
  - 1. Camp rules
  - 2. Sanitation instructions
  - 3. Garbage disposal
  - 4. Instructions relating to water
  
- c) The Public Health Education Programme for schools should include the following topics:
  - 1. Camp rules
  - 2. Sanitation
  - 3. Garbage disposal
  - 4. Nutrition
  - 5. Personal cleanliness and hygiene
  - 6. General health
  
- d) Public meetings on Public Health Education may cover any subject.

Nutrition education is a topic of fundamental importance, especially as a component of feeding programmes.

Talks should be held with beneficiaries while at the centers, in their camp quarters, through poster displays, and whenever possible through mass communication methods. The educational content can be limited to simple messages. Some examples of these messages are:

- 1. "Breast-feed children as long as possible."
- 2. "Start feeding semi-solid foods from six months of age."
- 3. "Feed young children several times a day. A child below age four cannot consume the amount of food he needs in only two meals."
- 4. "Illness with fever or diarrhea does not require cutting down the food intake or changing the diet in any way."
- 5. "Make full use of the relief services available. Mothers should learn the signs and symptoms of common diseases so that they can seek advice immediately."
- 6. "Ensure children are immunized, when such programs are offered by the authorities."
- 7. "Keep yourself and your surroundings clean; drink only clean water."
- 8. "There are advantages to a small family."

These simple messages can of course be elaborated to varying degrees depending on local circumstances. (PAG, 1977)

Environmental health education is another topic area that must be covered carefully.

Experience has shown that sanitary installations provided as a part of the relief work after disasters do not always fulfill their purpose because they are either misused or underused. Among the most important reasons for this lack of appreciation among disaster victims are:

1. Psychological effects of the disaster, manifested mainly in an apathetic attitude.
2. Contrasts with victims' living conditions before the disaster.
3. Victims' lack of knowledge as to the use and maintenance of the installations provided.

The provision of sanitary installations in itself, therefore, is not enough to solve the problem; the people must use them properly so that an adequate level of personal cleanliness and of environmental hygiene is attained. It therefore becomes the responsibility of all environmental health workers to participate actively in educating the disaster-stricken people to use the sanitary installations properly, to comply with the rules of personal hygiene, and to safeguard the health of the community.

The sanitation education will include:

- Avoidance of using contaminated water.
- Avoidance of wasting water.
- Cooperation in distributing water.
- Cooperation in protecting the water supply system.
- Cooperation in using the excreta disposal installations properly and in keeping them clean.
- Avoidance of scattering refuse and observance of rules for its proper collection.
- Cooperation in reducing insect populations.
- Cleanliness of the shelters and camp.
- Cleanliness of food containers, dishes, utensils.
- Observance of personal hygiene rules (body and clothing).
- Proper collection of manure.
- Participation in community clean-up work. (PAG, 1977)



### 3. Priorities

These general priorities in the presentation of information are expressed in the order of the topics listed above. Priorities should be adjusted, however, to help control specific public health threats as they occur.

### 4. Method of Presentation

It is the policy of the UNHCR to encourage the Public Health Education Programme to utilize an imaginative range of presentation techniques to present the information. Home visits should use visual aids and leaflets describing the major points of the presentation and should be left with each family at the end of the visit. Public meetings and school courses should use audio-visual materials to the greatest extent possible. Plays, mime and musical presentations are encouraged.

Of all the different kinds of visual aids that can be employed in public health education, few are appropriate in refugee camp situations. Where electricity is available, movie projectors and films may be appropriate for use with small groups. The limiting factor in both cases will be the difficulty associated with finding a sufficiently dark building in which to work, for daytime activities. Where electricity is not available, and where a cheaper and less fragile visual aid is required, blackboards and flannelgraphs are the most appropriate choice.

#### Flannelgraphs

Instead of using the blackboard, a flannelgraph saves a great deal of time, and it is a clearer method of illustration. It simply requires a board about 4 ft. by 3 ft., covered with flannel on one side, on which are stuck pictures and works made of paper with a backing of sandpaper or other suitable material. The preparation of such a board and the pictures and labels is inexpensive and can be quickly carried out by the staff or older children in any school. (FAO, 1966)

## 5. Training Programme

A training programme should be utilized as a joint effort by UNHCR and various voluntary agencies operating in the camps to train selected refugees as community-based public health workers. A Public Health Education Officer appointed by UNHCR or a programme director designated by a voluntary agency should develop and implement the programme in general accordance with these guidelines.

These classifications of workers should be selected from each section, women as extensionists or home visitors, men or women as instructors for schools and public meetings, and men as orientors for new arrivals. Persons chosen from a section should always work in that section. In all cases, characteristics of the public health workers (age, sex, marital status, language group) should be chosen after serious consideration of cultural realities amongst the refugee population.

Training classes should begin as soon as a suitable group has been chosen. The training course should include sessions on information about the public health topics, methods of teaching, methods of extension work, and proper use of visual aids and leaflets. Training should cover topics slowly and thoroughly.

Once the training is complete, each worker should begin according to his assigned routine. For the first few days one of the agency or UNHCR staff should accompany the worker to check on their presentation and make suggestions on how their techniques could be improved.

One period of each week should be set aside for recurrent training and introduction of new topics. Once a syllabus for training has been put into service, new workers can enter training at each of these sessions (but after an orientation course).

## 6. Extension Work

The home visitors programme is the top priority of the Public Health Education Programme. As such, emphasis should be given to training the workers in observation of health hazards, basic nutrition and medical surveillance, and on proper follow-up recording procedures. The home visitors should also receive orientations on the various site services, how they are organized, and who is in charge so that they can answer questions from the public should they arise.

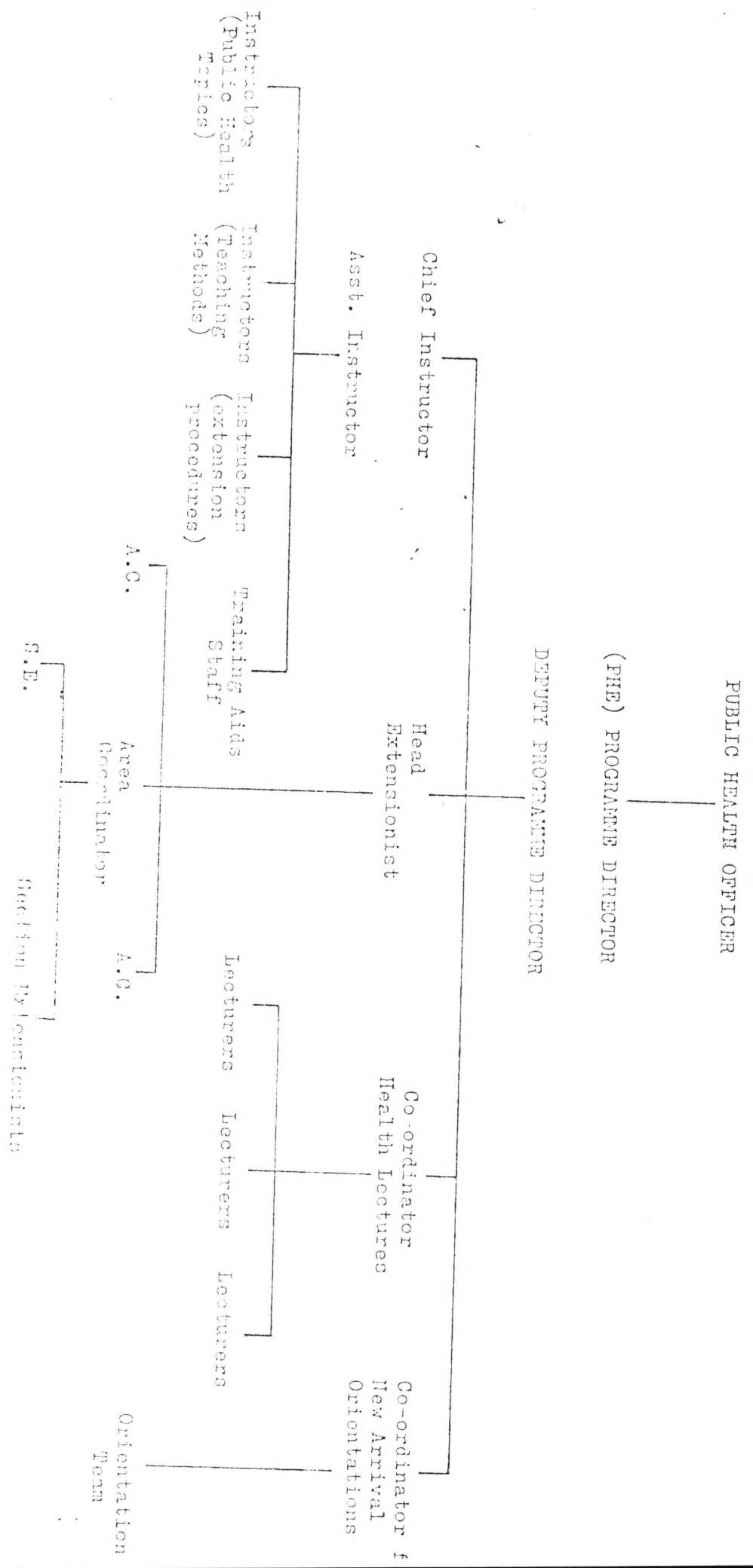
Experience from prior refugee situations indicates that initially, home visitors should work in pairs. This has three advantages; the workers cover topics more thoroughly and reinforce each other, the record keeping and surveillance are more accurate, and security for the women is better. After several complete tours of the assigned areas have been completed, the team can be divided if necessary.

### C. ORGANIZATION (UNHCR, 1980)

The person responsible for initiating the Public Health Education Programme in each camp is the Public Health Officer. The Public Health Officer may either appoint a programme director to organize the programme or can contract a volag or Thai government agency to develop and conduct this programme. If the latter course is chosen, purchasing and other functions necessary to successfully implement the programme.

A suggested organization for a Public Health Education Programme is shown on the following page.

SUGGESTED ORGANISATION FOR  
PUBLIC HEALTH EDUCATION PROGRAMME (PHE)



D. ROUTINES (UNHCR, 1980)

Routines should be developed according to the needs of each camp and its special problems. As a minimum, a plan for the routine, sequential visiting of each household and school in a section noted on a map of the camp so that monitoring of progress can be checked.

The Public Health Education Programme Director shall prepare a report on the progress of the programme and present it to the Public Health Officer. The Public Health Officer and the Programme Director will then jointly present an oral summation of the report to the Camp Administrator and Camp Construction Officer. Copies of the written report will be forwarded to the UNHCR Education Officer, the UNHCR Public Health Co-ordinator, and the UNHCR Chief Engineer and the Planning and Evaluation Team.

E. JOB SPECIFICATIONS (UNHCR, 1980)

1. Title or Position: Public Health Education Programme Director
  - A. Supervisor: Public Health Officer, Camp Administrator
  - B. Subordinates: Persons in the Public Health Education Programme
  - C. Duties:
    - To approve and co-ordinate activities in the Public Health Education Programme
    - To prepare reports of Public Health Education activity to the Camp Administrator and Public Health Officer
    - To attend public health related meetings
  - D. Responsibilities:
    - To ensure that the programme receives proper funding
    - To manage the programme's budget
    - To maintain contact with all aspects of public health in the camp
  - E. Co-ordinates Work with:
    - Volags, Sanitation Officer, Medical Co-ordinator, Education Officer, Nutrition Officer, any office that is connected with public health
  - F. Maintains Communications with:

Personal contact with the above and Thai Public Health
  - G. Maintains Communications by:

Personal contact

2. Title or Position: Deputy Public Health Education Programme Director
- A. Duties: Assistant to the Public Health Education Programme  
Director

3. Title or Position: Chief Instructor

A. Supervisor: Public Health Education Programme Director

B. Subordinates: Assistant instructor, training instructors and  
training aids staff

C. Duties:

- To co-ordinate lecture topics and lecturers
- To recruit lecturers for the programme
- To supervise the staff for training aids

D. Responsibilities:

- To ensure that topics are covered thoroughly by lecturers
- To ensure that the lecturers are competent
- To assist in developing lecture material

E. Co-ordinates Work with:

Head Extensionist, Co-ordinator of Health Lectures, Co-ordinator for  
New Arrival Orientations



4. Title or Position: Head Extensionist

A. Supervisor: Public Health Education Programme Director

B. Subordinates: Area Co-ordinators, section extensionists

C. Duties:

- To co-ordinate the public health extension programme

- To organize and implement an effective home visit programme

D. Responsibilities:

- To ensure that the extension programme is effectively carried out

E. Co-ordinates Work with:

Chief Instructor, Co-ordinator of Health Lectures, Co-ordinator for  
New Arrival Orientations

5. Title or Position: Co-ordinator of Health Lectures

A. Supervisor: Public Health Education Programme Director

B. Subordinates: lecturers

C. Duties:

- To co-ordinate public health education lectures for the various training programmes
- To recruit persons with experience in lecture topics and help them to develop lecture material

D. Responsibilities:

- To ensure that the lecturers information is accurate and delivered clearly and effectively

E. Co-ordinate Work with:

Chief Instructor, Head Extensionist, Co-ordinator for New Arrival Orientation

6. Title or Position: Co-ordinator for New Arrival Orientation

A. Supervisor: Public Health Education Programme Director

B. Subordinates: Orientation teams

C. Duties:

- To supervise the orientation teams

D. Responsibilities:

- To ensure that public health orientation is given to all newly arriving refugees

E. Co-ordinates Work with:

Chief Instructor, Head Extensionist, Co-ordinator of Health Lectures

Section V. Feeding and Nutrition

19. Bulk Rations

A. INTRODUCTION (UNHCR, 1980)

These standards are necessary to ensure proper method of handling the large scale distribution of food in the refugee camps.

To prevent malnutrition among the refugee population, daily bulk rations must include foodstuffs familiar and acceptable to the refugees, in addition to providing high nutritional content. Bulk ration distribution requires competent supervision and surveillance by qualified personnel.

B. GUIDELINES (UNHCR, 1980)

1. Objectives:

The objectives of UNHCR in the distribution of the bulk rations are:

- a. To provide an adequate daily diet for all refugees through distribution of uncooked foods which provide the daily allowances of energy, proteins, vitamins and minerals.
- b. To provide foods of sufficient quantity and quality in order to prevent nutritional deficiency (e.g. protein-energy malnutrition (PEM), vitamin deficiency, etc.)
- c. To provide a ration of sufficient quantity and quality so that unintentional shortages occurring in the ration for short periods of time will not seriously affect the nutritional status of the refugees. "Skimming," taxing or other intentional withholding of the ration will be detected through the Nutritional Surveillance Programme and will be handled through legal channels.

2. Coordination of Bulk Ration Distribution:

Bulk ration distribution in each camp is the coordinated responsibility of the Central Purchasing Office, the UNHCR Nutrition Officer and WFP.

3. General Characteristics:

Foods used, should, as far as possible, be:

- from local (national) food supplies
- limited in number of items
- acceptable (in relation to food habits and religion)
- easy to transport and store

- nutritionally compact (e.g. high caloric and nutritive value per unit weight)
- simple to distribute (if possible, in pre-packed ration units, or in dry form)

See Appendix 1 which is designed to aid in the selection of appropriate foods by country and by region.

#### 4. Facilities for Bulk Ration Distribution

The area designated as a receiving point in each section where rations are delivered should be covered and well drained during the rainy season. In addition, plastic sheeting should be placed on the ground to prevent spoilage of goods delivered in bags or sacks.

#### 5. Ration Composition Standards

Rations that are adequate for a daily diet for the majority of the population will be provided to the whole caseload. Daily ration composition must provide:

Protein; 50g/person/daily

Energy; 2100K als/person/daily

Vitamin A; 2,500 I.U. (750 mg.)/person/daily

Vitamin C; 30 mg./person/daily

Iron; 20 mg./person/daily

(A diet meeting these standards will also be adequate in the remaining important vitamins and minerals.)

WFP under advice from the UNHCR Nutrition Officer will be responsible for ration plans (e.g. specific commodities and amounts needed to meet the required compositions). The ration elements and amounts are tentative and may be changed if it is shown that the additional caseload overloads the

market for an item or if adjustments could raise the nutritional value of the diet. Any changes made in ration content must meet nutrient requirements and be approved by the UNHCR Nutrition Officer.

#### 6. Bulk Ration Distribution Schedule

WFP and UNHCR will jointly develop a plan for distribution of rations based on type of commodity (e.g. vegetables may be distributed twice weekly, rice and dried fish weekly, cooking oil monthly, etc.) Distribution schedules will be coordinated with the camp FPC and the camp Logistics Officer. The Logistics Officer will notify section leaders of distribution schedules. (Rations in scheduled amounts will then be delivered to the designated area in each section.)

#### 7. Common Problems in Distribution

Common problems in distribution are:

- rations unequally distributed by section leaders
- portions withheld as a means of control by certain groups
- portions withheld for resale via black markets
- women and children deprived of their portions by working males
- unforeseen temporary shortages due to delivery failure or transport problems
- accidental losses
- portions may be spoiled (rotten)

Therefore, if there is interruption of bulk ration distribution, the population may in time develop early signs of PEM.

#### 8. Surveillance

The surveillance of the bulk feeding programme will rely on the normal surveillance by SFCs, as the nutritional status of vulnerable groups will

indicate problems of distribution at the family level. Spot checks will be carried out by members of the UNHCR Planning and Evaluation Team to ascertain amounts of food distributed to the family. Any problems noted will be reported to the Camp Administrator.



### C. ORGANISATION (UNHCR, 1980)

#### 1. Logistics Officer

Each camp will have a Logistics Officer. He will be responsible for providing information and distribution schedules regarding amounts to be distributed to the warehouse dispatching crew. He will be responsible for storage of the food, for the scheduling of deliveries from the warehouse and for ensuring that the distribution is done in proper sequence to prevent spoilage. The Logistics Officer is also responsible for coordination with SFP regarding procedures for delivery of goods to the camp warehouse.

#### 2. Camp Feeding Programme Coordinator

The Camp FPC will be responsible for ensuring that bulk ration standards are met. The FPC will report any proposed changes in bulk ration content to the UNHCR Nutrition Officer for approvals and any problems in quality of content of rations.

#### 3. Organising a Distribution

The key to running a successful food distribution programme is to be well organized. If rations are to be given out to, say, 5000 people, it is unrealistic to expect them to form a queue quietly and take food from openly exposed sacks - chaos would result.

The participation of the community in the relief programme and in decision-making will help towards an orderly distribution. Holding public meetings and keeping the population informed through administrative and natural leaders is essential. However, responsible posts (storekeeping, administration) must be given to reliable individuals outside the community to rule out personal bias, preferences, or vulnerability to pressure.

## D. ROUTINES

### 1. Ration Delivery

WFP trucks arrive at each camp warehouse (refer to UNHCR storage manual). The camp Logistics Officer and the warehouse supply team coordinate delivery of bulk rations to specified section areas, for distribution of rations by section and block leaders according to planned schedules.

### 2. Distribution Method

Food is delivered in bulk to each section where it is divided by the section and block leaders and then distributed to the individual families by the block leaders. Section and block leaders are to be held accountable for proper distribution.

In a camp, the distribution area should be located near the store and fenced off. People should be served from several lines simultaneously (as many as necessary), each with a check-point for ration cards. If the camp has, for example, 10 sections, take sections 1 and 2 on Monday, 3 and 4 on Tuesday, and so on.

PLAN FOR DISTRIBUTION OF DRY FOOD

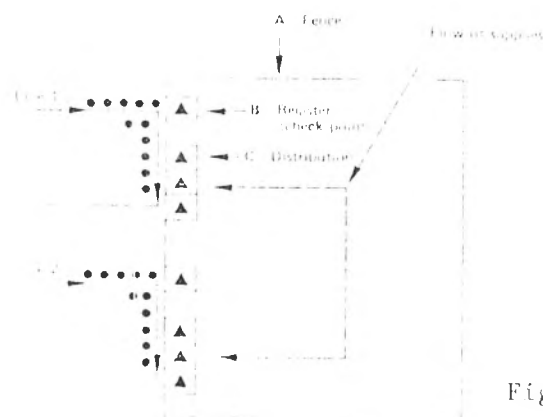


Figure 12.

A. Fence of mats, bamboo, wire, or rope depending on resources and needs. Narrowing aisles for line-ups might also be necessary.

B. Check point for cards. Sheltered by roof (or umbrella). The number of rations is called out clearly to distributors at C.

C. Distribution point. Several bags at a time can be emptied on to a tarpaulin for quicker distribution.

People should be lined up for distribution and be called - e.g., four at a time - by the guards or have to pass check-points. If the ground is dry, they should be seated in lines. This will prevent pushing and is much less tiring than standing for hours, perhaps in the sun.

Always inform people well in advance that a food distribution is to occur on a certain day. Regular distribution on a fixed day is best and causes least confusion.

A distribution each week or fortnight is recommended because hungry people have difficulty in economizing their food. Also, displaced persons have limited possibilities for storing supplies.

A reserve supply of empty bags, tins, etc. should be kept for people who are completely destitute, but as a rule people should bring their own receptacles. Bottles and baskets for cereals are usually easily found by the population. (de Ville de Goyet, 1978)

The distribution will be completed in 5 days, allowing 2 days to arrange the store and get new supplies. With a camp twice as big, distribute to sectors 1-5 one week and 6-10 the next. When sudden rains or delayed lorries ruin your plans, inform people in time.

RATION CARD

Example No. 1

Front

Serial no. corresponding to register → 02795 Sector no. \_\_\_\_\_

Name \_\_\_\_\_

House no. & village \_\_\_\_\_

Children under 10 \_\_\_\_\_

Total no. in family \_\_\_\_\_

Space for stamp with signature of registry clerk.

---

Back

APRIL			MAY			JUNE			BLANKETS
1	11	21	1	11	21	1	11	21	
2	12	*	*	*	*	*	*	*	Spaces reserved for other distributions
3	13	*	*	*	*	*	*	*	
4	14								
5	15								
6	16								
7	17								
8	18								
9	19								
10	20								

(all dates printed)

N.B. If another item such as, for instance, soap is issued regularly on this card, the relevant dates can be crossed out as well as or instead of being printed in.

Example No. 2 (adapted from Haitian Red Cross Society ration card):

	1	2	3	4	5	6	7	8	9	10
11										11
20	LOCALITY .....									
21	FATHER'S NAME .....									
22										
23	CHILDREN 6 TO 5 YEARS									
24	RATION CARD									
25										
26	26	24	23	22	21	20	19	18	17	16

Figure 13.

Identifying individuals - ration cards - To ensure that each individual receives only one ration, some form of identification must be used. In small communities this can be done from names, village lists, etc. With larger numbers of people, ration cards must be given out. To ensure that each family receives only one card, distribute these on a house-to-house basis, or at a single distribution attended by the entire population.

A typical ration card is shown in Fig. 13. It should include:

- sector number
- name of head of family and home town/village
- total number of family members
- number of children under 5 (or other suitable age limit)

and on the back, a system for marking rations received, blankets, etc.

(Fig. 13, Example 1).

Exchange these cards for new ones every third month. There will always be people who pretend they have "lost" their card, but even if it is a rule never to give a new one, some cases may be found to be genuine and new cards given.

Recording beneficiaries' names and addresses in registers is often time-consuming and ineffective in preventing abuses of the system by the feeding-centre personnel. A simpler system is to use a feeding card with a counterfoil that can be torn off when the ration is received. The number of rations distributed (number of counterfoils) should be compared with the amount of the food actually taken from the store.

Responsibility for the issue of ration cards should be in the hands of a single person. This will save other staff from being bothered when the person in charge is not available.

All ration cards should be marked with a stamp that cannot be forged and is kept by the supervisor. Casual checks should be made at the village market to ascertain whether rations are being sold there.

Staffing and equipment - For each distribution line (see Fig. 12):

1 clerk, 1 person to distribute each food item, at least 2 crowd controllers; ration cards, rubber stamps, receptacles (half petrol-drums, tarpaulins, etc.) for food, standard measures (tins and cans), tables and benches. (de Ville de Goyet, 1978).

### 3. Records

The recording of deliveries to the camp and the recording of the consignments to each section is the responsibility of the camp Logistics Officer. Records will be on the standard forms shown in Annex I.

### 4. Rat Control

On a periodic basis the camp Logistics Officer will ensure that adequate rat control measures are taken in coordination with the camp vector control team. It is the responsibility of the camp Logistics Officer to ensure that rat poisons do not contaminate food supplies.

### 5. Surveillance

The camp Logistics Officer will conduct random checks of the distribution system to ensure that minimum pilferage occurs.

E. JOB SPECIFICATIONS (UNHCR, 1980)

1. Title or Position: Camp Feeding Programme Coordinator (Involvement with bulk ration distribution)
  - A. Supervisor: UNHCR Nutrition Officer
  - B. Subordinates: Camp Logistics Officer
  - C. Duties:
    - To ensure that rations distributed meet the required standards
    - To ensure that families receive proper amounts of rations
  - D. Responsibilities:
    - To periodically check quality, amounts and contents of bulk rations delivered and distributed
    - To assist in surveillance programmes of the nutritional status of the families in the camp.
    - To report any improper ration distributions as indicated by decreases in nutritional status of the refugees to the Nutrition Officer.
  - E. Coordinates Work With:

ICRC Nutrition Advisor, WFP, Logistics Officer
  - F. Maintains Communication With:

Camp Administrator, UNHCR Nutrition Officer, SFP, Coordinating Committee
  - G. Maintains Communications By:
    - Attending SFP Coordinating Committee meetings
    - Periodic reports to Nutrition Officer
    - Personal contact with WFP

2. Title or Position: Logistics OfficerA. Supervisor: Camp AdministratorB. Subordinates: Warehouse clerks, truck drivers involved in ration deliveries, section and block leaders receiving rationsC. Duties:

- To ensure that goods delivered are the required amounts
- To ensure that goods received are recorded adequately
- To ensure that the goods are adequately stored to prevent spoilage and keep free from rats
- To ensure that goods from the warehouse are withdrawn in adequate sequence to prevent expiration and spoilage

D. Responsibilities:

- To record amounts of goods received, withdrawn and delivered
- To notify Camp Administrator of amounts needed and problems regarding supplies
- To routinely check storage facilities for proper hygiene levels

E. Coordinates Work With:

WFP, ICRC Nutritional Advisor, UNHCR Nutrition Officer, FPC,  
Central processing office

F. Maintains Communications With:

Nutrition Advisory Committee, UNHCR Nutrition Officer

G. Maintains Communications By:

Personal contact with: WFP staff involved with bulk ration distribution, warehouse clerks



## APPENDIX 1: Popular Staples

The following list provides information on a country basis on the major foods consumed in 111 countries. It is planned to help select the correct foods to send to the affected area during an emergency. For countries that are large in size and where dietary patterns vary from one area to another, information is specified by regions. It is important for the user of this list to realize that it gives only a summary of the most important foods consumed. Although the list gives information by different regions, it cannot always mention differences that may exist between rural and urban areas or between socio-economic classes within each region.

### MAJOR FOODS AND ACCEPTABLE

#### Major Food

Country	Region	Staple	Accompaniment
Africa	West	Wheat flour	Vegetables
		Maize flour	Fruits
		Rice	Meat
Africa	North	Barley	Mutton fat
			Vegetable oil
Africa	South	Wheat flour	Vegetables
		Barley	Broad beans
			Olive Oil
Africa	South		Reprocessed
			Butter
Africa	West	Dates	
		Millet	
		Meat	
Africa	West	Barley	
Africa	West	Cassava	Leafy vegetables
			Pulses
			Peanuts
Africa	West		Meat
Africa	West	Maize flour	Leafy Vegetables
			Pulses
			Peanuts
Africa	West		Meat
Africa	West	Millet	Leafy vegetables
			Pulses
			Peanuts
Africa	West		Meat

## and Acceptable Alternatives (FAG, 1977)

The information provided has been obtained from a number of sources, including food consumption data, the FAO Food Balance Sheets, material on food habits, and reports on experiences with nutrition and food aid programs. A number of references to reviews and bibliographies on food patterns and socioeconomic aspects of food and nutrition in a great number of countries is given at the end of the list. These references are intended for those who need to know where data can be found on food consumption and food habits in a particular country.

### ALTERNATIVES IN ADULT DIETS

Staple	Acceptable Alternative	Remarks
Sorghum	Pulses	Pink broadbeans. Fisher's knowledge inadequate.
Rice	Milk powder	Pink broadbeans
Wheat, Bulgur		
Wheat flour		
Milk powder		
Wheat flour		
Maize flour		
Rice		
Dehydrated potato		
Wheat flour		
Rice		
Wheat flour		
Rice		
Sweet potato		
Yam		

Fish not used by pastoralists

Country	Region	Major Food	Staple	Accompaniment	Acceptable Alternative	Remarks
1. Argentina		Sweet potato Yam		Fishes Peanuts Mung beans Vegetables Milk	Rice Wheat flour Milk powder	
2. Bolivia		Barley Rice Dues		Vegetables Fish Meat Milk Vegetable oil Butter	Wheat flour Wheat, Bulgur Milk powder	Pork products
3. Bangladesh		Rice		Leafy vegetables Pigeon pea Fish Milk Meat Vegetable oil Ghee	Wheat flour Sorghum Maize flour Milk powder	Pork products
4. Barbados		Rice Potato Sweet potato Wheat flour		Pulses Pigeon pea Fish Meat Milk Vegetable oil	Dehydrated potato Milk powder	
5. Brazil		Rice Peanut		Phaseolus vulgaris Meat Fish Milk	Wheat flour Maize flour Cassava/tapioca Milk powder	
6. Burma		Millet Sorghum		Vegetables Pulses Peanuts Meat Fish Vegetable oil	Rice Wheat Maize	Pork products
7. Bhutan		Rice Barley Wheat flour		Milk Cheese-milk products Yoghourt Meat Vegetable oil Butter	Maize flour Milk powder	
8. Bolivia	Andean Zone	Maize flour Wheat flour Potato		Pulses Meat Milk	Rice Dehydrated potato Barley Milk powder	Fish not known as food in the Andean Zone
	Tropical Zone	Cassava Mango		Leafy Vegetables Meat	Rice Milk	

Country	Region	Major Food		Acceptable Alternative		Remarks
		Staple	Accompaniment	Staple	Accompaniment	
12. Benin		Sorghum Maize flour	Cow peas/black-eyed beans Milk Meat Vegetable oil Butter	Wheat flour	Milk powder	
13. Benin	North Northwest	Cassava Plantain Maize flour	Pulses Peanut oil Vegetables Meat Pork	Rice Wheat flour Dehydrated potato	Milk powder	Do spare long coastline. Fish is not consumed much. Vegetable oils and animal fats are known in many all regions.
	West	Cassava Maize flour	Pulses Peanut oil Vegetables Pork	Rice Wheat flour Dehydrated potato	Milk powder	
	East	Rice Maize flour Cassava	Pulses Peanut oil Vegetables Pork	Wheat flour Dehydrated potato	Milk powder	
	South	Wheat flour	Rice Milk	Rice	Milk powder	
14. Benin		Rice	Vegetables Pulses Fish Meat Vegetable oil Soya oil	Wheat flour	Vegetable oil	
15. Benin		Dry legumes Sweet potato Maize flour Cassava	Vegetables Meat Milk Palm oil Cottonseed oil	Rice Wheat flour Dehydrated potato	Milk powder	Long record of bananas. Cow milk is popular - regularly consumed by the cattle owners. Fish consumed near Lake and rivers. Often women do not eat meat. Introduction of yellow maize may create some difficulties.
16. Cambodia		Rice	Soya bean Peanuts Vegetables Fish Soya oil coconut oil	Wheat flour Maize flour	—	
17. Cameroon	North (Sudano-Sahel)	Millet Sorghum	Milk Condensed oil Peanut oil	Wheat flour Rice	Milk powder	Pre harvest food shortage is common. Introduction of yellow maize may give some difficulties.
	Guinea Zone	Cassava Maize flour	Vegetables Meat Fish	Wheat flour Rice	—	

Country	Region	Major Food	Staple	Accompaniment	Staple	Accompaniment	Remarks
15. Central American Empire	Central Zone (Southern)	Fruits, vegetables, beans, meat, fish, palm oil	Cassava	Vegetables, beans, meat, fish	Wheat flour	---	Problems of food is common. Introduction of red meat, dairy products, and fish.
			Plantain		Rice		
			Benana		Rice		
16. Central American Empire	South Central Zone	Vegetables, pulses, phosphates, vegetables, cow peas, meat, fish, peanut oil	Cassava	Vegetables, beans, meat, fish	Wheat flour	---	Problems of food is common. Introduction of red meat, dairy products, and fish.
			Maize flour		Wheat flour		
			Meat		Wheat flour		
			Sea food		Wheat flour		
			Maize flour		Wheat flour		
			Rice		Wheat flour		
			Meat		Wheat flour		
			Sea food		Wheat flour		
			Maize flour		Wheat flour		
			Rice		Wheat flour		
17. Colombia	North (Miami's past totalist)	Meat, fish, vegetable products, butter	Millet	Vegetables, pulses, phosphates, vegetables, cow peas, meat, fish, peanut oil	Rice	Milk powder	Problems of food is common. Introduction of red meat, dairy products, and fish.
			Sorghum		Rice		
			Meat		Maize flour		
			Milk		Dehydrated potato		
			Chicken, milk products		Dehydrated potato		
			Butter		Dehydrated potato		
			Wheat flour		Dehydrated potato		
			Peas		Dehydrated potato		
			Maize flour		Dehydrated potato		
			Butter		Dehydrated potato		
18. Colombia	Coastal Zone	Meat, fish, vegetable products, fish, sunflower seed oil, refined oil	Rice	Vegetables, pulses, phosphates, vegetables, cow peas, meat, fish, peanut oil	Wheat flour	---	Fishes often consumed in the Andean Zone. Vegetable oils and animal fats are known in all regions.
			Plantain		Wheat flour		
			Maize flour		Rice		
			Meat		Dehydrated potato		
			Fish		Dehydrated potato		
			Phacelias		Dehydrated potato		
			vegetables		Cassava		
			Pulses		Wheat flour		
			Meat		Rice		
			Meat		Dehydrated potato		
19. Colombia	Andean Zone	Vegetables, pulses, sea food, fish	Plantain	Vegetables, pulses, phosphates, vegetables, cow peas, meat, fish, peanut oil	Wheat flour	---	Fishes often consumed in the Andean Zone. Vegetable oils and animal fats are known in all regions.
			Cassava		Rice		
			Meat		Dehydrated potato		
			Sea food		Dehydrated potato		
			Fish		Dehydrated potato		
			Vegetables		Dehydrated potato		
			Pulses		Dehydrated potato		
			Meat		Dehydrated potato		
			Meat		Dehydrated potato		
			Meat		Dehydrated potato		

Country Region Major Food Staple Accompaniment Acceptable Alternative Accompaniment Remarks

Country	Region	Major Food	Staple	Accompaniment	Acceptable Alternative	Accompaniment	Remarks
22 Congo		Vegetables, Meat, Fish, Peanut oil	Cassava Plantain Yam Sweet potato Rice	Leafy vegetables Tubers Meat Fish Peanut oil	Maize flour Wheat flour Dehydrated potato	—	
	East Congo	Vegetables, Meat, Palm oil, Cottonseed oil, Butter	Rice Maize flour Wheat flour	Phaseolus vulgaris Meat Palm oil Cottonseed oil Butter	Wheat flour	Milk powder Pulses	
23 Cuba		Pulse, Phaseolus vulgaris, Cow peas/black-eyed beans, Fish, Milk, Meat, Soyabean, Sunflower seed oil, Butter	Wheat flour Rice		Maize flour	Milk powder	
	24 Cyprus	Vegetables, Meat, Milk, Fish, Olive oil, Butter	Wheat flour		Rice	Milk powder	
25 Dahomey	North (Sudan Zone)	Vegetables, Phaseolus vulgaris, Cow peas/black-eyed beans, Meat, Fish, Vegetable oil, Butter	Miller Sorghum		Rice Wheat flour Maize flour	—	
		Vegetables, Phaseolus vulgaris, Cow peas/black-eyed beans, Meat, Fish, Palm oil	Maize flour Cassava Yam Cocoyam		Rice Wheat flour	—	Introduction of yellow maize may give some difficulties. Consumption of different staples varies according to seasonal supply. In the North, pre-harvest food shortage is common.

Country	Region	Staple	Major Food Accompaniment	Staple	Acceptable Alternative Accompaniment	Remarks
27. Dominican Republic		Rice Plantain Cassava	Pulses Phaseolus vulgaris Pigeon pea Meat Milk Peanut oil Beef fat	Wheat flour Maize flour	Milk powder Fish	Fish not popular as a food
28. Ecuador	<i>Coca Valley</i>	Rice Plantain	Phaseolus vulgaris Cow peas black-eyed beans Broad beans Fish	Wheat flour	Milk powder	Fish not known as food in the Andean Zone. Vegetable oils and animal fats are consumed in most of the regions.
	<i>Patate Valley</i>	Potato Wheat flour Barley Maize flour	Meat Milk	Dehydrated potato Rice Oats	Pulses	
	<i>Huancabamba Tropical Zone</i>	Cassava Plantain	Leafy veges- tables Meat Fish	Rice Dehydrated potato	—	
29. Egypt		Wheat flour Maize flour Rice	Vegetables Broad beans Meat Fish Milk Cheese-milk products Cottonseed oil	Wheat, Bulgur Sorghum	Milk powder	Pork avoidances. Fortifigreek flour used.
30. El Salvador		Maize flour	Phaseolus vulgaris Meat Cottonseed oil Pork fat Peanuts Chick pea	Wheat flour Rice Sorghum	—	
31. Equatorial Guinea	<i>Rio Muni</i>	Cassava Plantain Yam	Leafy veges- tables Pulses Fish Meat	Rice Wheat flour Dehydrated potato	—	
	<i>Fernando Po</i>	Cassava Yam Rice	Leafy veges- tables Fish Meat Nut oil	Wheat flour	—	

Country	Region	Staple	Major Food Accompaniment	Staple	Acceptable Alternative Accompaniment	Remarks
32. Congo	Upper	Rice	Vegetables Chick pea Broad beans Chow-choy Nut oil	Rice	—	Consumption of fish near lakes, rivers or sea. Col- regional variation in the diets. South and Southwest (false banana) is consumed.
		Maize flour Wheat flour	—	Wheat flour	—	
		Banana Yam Millet Sorghum	—	Wheat flour	—	
		Milk Rice Corn Sorghum	—	Wheat flour	—	
33. Congo	Lower	Yam Yam Cassava	Leafy veget- ables Coconut Pork Fish	Rice Wheat flour Dehydrated potato	—	
		Rice Wheat flour	Pulses Vegetables	Maize flour Milk Sorghum	—	
		Cassava Plantain	Vegetables Meat Fish Palm oil	Rice Maize flour	—	
		Rice Millet Sorghum Yam	Peanuts Meat Fish Palm oil	Wheat flour Maize flour	—	
34. Congo	Upper and Sudanic Zone	Millet Sorghum Yam Maize flour	Vegetables Pulses Cassava Cow peas/black- eyed beans Cluck pea Meat Fish Vegetable oil	Maize flour Rice Wheat flour	—	Introduction of yellow maize may give some difficulties. Consumption of staples varies accord- to seasonal supply. In the North, pre-harvest loss shortages are common.
		Maize flour Yam Cassava Cocoyam	Vegetables Cow peas/black- eyed beans Peanuts Fish Meat	Maize flour Rice Wheat flour	—	
		—	—	—	—	
		—	—	—	—	
35. The Gambia	Forest Zone	Maize flour Yam Cassava Cocoyam	Vegetables Cow peas/black- eyed beans Peanuts Fish Meat	Maize flour Rice Wheat flour	—	
		—	—	—	—	

Country Region Staple Major Food Accompaniment

37. Haiti

Major Food Accompaniment  
 Rice Maize flour Phascolus  
 vulgatus  
 Pigeon pea  
 Broad beans  
 Cottonseed oil  
 Meat  
 Pork fat

38. Guinea

Major Food Accompaniment  
 Rice Maize flour Leafy veges-  
 tubers  
 Peanuts  
 Meat  
 Fish

39. Guinea

Major Food Accompaniment  
 Rice Wheat flour Phascolus  
 vulgatus  
 Cow peas black-  
 eyed beans  
 Peanuts  
 Fish  
 Meat  
 Milk  
 Coconut oil

40. Haiti

Major Food Accompaniment  
 Maize flour Millet Phascolus  
 vulgatus  
 Cow peas black-  
 eyed beans  
 Meat  
 Fish  
 Vegetable oil

41. Haiti

Major Food Accompaniment  
 Maize flour Sweet potato Phascolus  
 vulgatus  
 Cassava Plantain Meat  
 Fish  
 Vegetable oil

42. Haiti

Major Food Accompaniment  
 Rice Wheat Noodles Mung beans  
 Golden mung  
 beans  
 Vegetables  
 Fish  
 Pork  
 Vegetable oil

43. Haiti

Major Food Accompaniment  
 Wheat flour Pulses  
 Pigeon pea  
 Chick pea  
 Split peas,  
 lentils  
 Milk  
 Yoghurt  
 Vegetables

Staple Acceptable Alternative Accompaniment Remarks

Rice Pulses  
 Wheat flour Milk  
 Oats powder

Wheat flour

Introduction of yellow maize may give difficulties  
 Pre-harvest food shortage occurs. Milk consumed  
 Middle Guinea.

Dehydrated  
 potato

Milk  
 powder

Food habits differ among various populations

Rice Pulses  
 Wheat flour Milk  
 Sorghum powder  
 Dehydrated  
 potato

Wheat flour Pulses  
 Rice Milk  
 Sorghum powder  
 Dehydrated  
 potato

Wheat flour  
 Soyabean  
 Split peas,  
 lentils  
 Dry fish

Rice  
 Millet

Peanuts  
 Milk  
 powder

Vegetarianism but milk and milk products are  
 appreciated as food. Beef may not be acceptable  
 among meat eaters. Pork avoidance also.



Country	Region	Staple	Major Food Accompaniment	Acceptable Alternative Staple	Accompaniment	Remarks
45. Guinea	South	Rice	Pigeon pea Split peas, lentils Milk Yoghurt Vegetable oil Ghee	Sorghum Wheat-flour	Peanut Milk powder	In West, fruit, roots and tubers make up the main staple. Among non-Moslem population, pork is consumed.
46. Guinea		Rice Cassava Maize flour	Vegetables Soyabean Mung beans Coddled mung beans Coconut oil Fish Meat	Wheat-flour Sorghum		In West, fruit roots and tubers make up the main staple. Among non-Moslem population, pork is consumed.
47. Guinea		Wheat flour Rice	Chick peas Split peas, lentils Meat Milk Cheese-milk products Yoghurt Vegetable oil	Corn Barley Wheat, Bulgur	Milk powder Sesame oil	Seasonal changes in diet. Pork avoidances. Fish not familiar as food except on coast.
48. Guinea		Wheat flour Rice Barley	Split peas, beans Broad beans Milk Meat Palm oil	Sorghum Wheat, Bulgur	Milk powder	Pork avoidances. Dates, staple food in South.
49. Ivory Coast	North (Coastal Zone)	Yam Sorghum Maize flour	Vegetables Vegetable oil Pulses Peanuts Meat Fish	Rice Wheat-flour		Introduction of yellow maize may give some difficulties. Food varies according to seasons. Pre-harvest food shortage known in North.
50. Ivory Coast	South (Forest Zone)	Yam Cassava Cocoyam Maize flour Plantain	Vegetables Pulses Peanuts Meat Fish Palm oil Peanut oil	Maize flour Rice Wheat-flour Dehydrated potato		
51. Jamaica		Wheat-flour Sweet potato Bread fruit Plantain	Chick pea Phaseolus vulgaris Cocoyam Yam	Rice Maize flour	Milk Milk powder	

Country	Region	Major Food	Staple	Accompaniment	Acceptable Alternative Staple	Accompaniment	Remarks
50. Jordan	Saudi <i>P. Jordan</i>		Wheat-flour	Chick pea Split peas, lentils Vegetables Milk Cheese-milk products Olive oil	Wheat, Bulgur Rice Bulky	Milk powder	Fish not known as food. Pork avoidances
51. Kuwait	Saudi <i>P. Jordan</i>		Milk Cheese-milk products Wheat-flour Millet	—	Milk powder	—	—
52. Kuwait	Saudi <i>P. Jordan</i>		Maize flour Millet Sorghum Plantain	Leafy veget- ables Meat Pigeon pea Pulses Phaseolus vulgaris Vegetable oil Mutton fat Beet fat	Wheat-flour Cassava flamma	Milk powder	Fish consumed on the coast and on shores of lagoon
53. Kuwait	<i>P. Jordan</i>		Millet Broom Milk Meat	—	Yam	—	—
54. Kuwait			Rice Barley Sweet potato Wheat-flour Wheat-noodles	Vegetables Mung beans Golden mung beans Fish Meat Eggs Vegetable oil	Millet Sorghum	Sesame seeds Dried fish	Kinchi, fermented oil, figs, is popular
55. Kuwait			Wheat-flour Barley Rice	Fruits Mung beans Cheese-milk products Meat	Wheat Bulgur Yam	—	Pork avoidances
56. Laos			Rice	Vegetables Fish Vegetable oil Mutton fat	Maize flour Wheat flour	—	—

Country	Region	Major Food	Staple	Accompaniment	Staple	Acceptable Alternative Accompaniment	Remarks
19. Egypt		Wheat flour Vegetables Chicken Cow peas/black-eyed beans Broad beans Milk Cheese-milk products Cottonseed oil Olive oil Beef fat	Wheat flour		Rice	Milk Milk powder	Fish avoidances for Muslims.
20. Egypt		Vegetables Phaseolus vulgaris Meat Milk Vegetable oil beef fat Mutton fat	Maize flour Sorghum		Wheat flour Rice Oats Cassava/tarina	Milk Milk powder Peanuts Cow peas/black-eyed beans	Fish is not used as food.
21. Egypt		Phaseolus vulgaris Cow peas/black-eyed beans Leafy vegetables Peanuts Fish Palm oil	Rice Cassava Maize flour		Wheat flour Dehydrated potato Cassava/tarina	Dry fish	
22. Egypt	Sinai Egyptian	Chicken Split peas/beans Broad beans Meat Canned meat Olive oil	Wheat flour Barley Dates		Rice	Milk Milk powder	Fish not used as food outside coastal regions. Pork avoidances.
23. Maldives Republic		Leafy vegetables Meat Fish Peanut oil Mutton fat Beef fat	Dates Milk		Rice Wheat flour Yam	—	
24. Maldives Republic		Vegetables Cow peas/black-eyed beans Pigeon pea Peanut Fish Meat	Rice Cassava Maize flour Yam Sweet potato		Wheat flour Dehydrated potato	—	Consumption varies according to seasonal supply.
25. Maldives		Vegetables Cow peas/black-eyed beans Pigeon pea Peanut Fish Meat	Maize flour Cassava		Rice Wheat flour Dehydrated potato	Vegetable oil	Pre-harvest shortages known. Introduction of yellow maize may give some difficulties.

Acceptable Alternative

Country	Region	Staple	Major Food Accompaniment	Staple	Accompaniment	Remarks
60. Malaysia		Rice	Vegetables Leafy vegetables Soya bean Pigeon pea Chicken Fish Coconut oil Marion fat	Wheat-flour	Vegetable oil	Different ethnic groups exist with each food; pork is avoided by Moslems and beef by the Hindus.
61. Malawi	<i>Shire Valley Zone</i> (some pastoralists)	Milk Cheese-milk products Millet	Leafy vegetables Peanuts Fish Meat	Milk Wheat-flour Maize flour		Pork is not consumed. Pastoralists don't eat fish. Introduction of yellow maize at Songwezi may give some difficulties. Vegetables and animal fats are known in most regions of country.
62. Malawi	<i>Southern Zone</i> (mainly cattle and manure and pastoralists)	Millet Fonio—seeds of crab grass Rice Cassava	Leafy vegetables Peanuts Fish Meat	Wheat-flour Vegetable oil		
63. Mauritania	<i>Sahel and Sahel</i> (mainly pastoralists)	Wheat-flour Wheat-pasta	Broad beans Split peas, lentils Black peas Meat Fish Olive oil Beef fat	Rice Wheat-flour	Vegetable oil	
64. Mauritania	<i>Sahel</i> (mainly pastoralists)	Millet Milk Dates	Meat Milk Butter	Rice Wheat flour	Milk powder	Fish not consumed by pastoralists.
	<i>Sahel</i> (Senguel Valley, farming communities)	Millet Sorghum Maize flour Sweet potato	Vegetables Pulses Fish Meat Peanut oil	Rice Wheat flour	Milk powder	
		Rice	Pigeon pea Chicken Mung beans Peanuts Vegetables Meat Milk	Wheat flour	Milk powder	

Country	Region	Major Food	Staple	Accompaniment	Staple	Accompaniment	Remarks
63. Mexico			Maize flour Rice	Phaseolus autogaris Pork Chicken Milk Cheese-milk products Vegetable oil	Wheat-flour	Milk powder	Fish not native usually known as a food. Food habits differ among regions.
64. Mexico			Meat Wheat flour	Milk Cheese-milk products Yoghurt Vegetables Butter	Rice	Milk powder	Fish not often consumed. Meat is the staple.
67. Mexico	North		Wheat flour Barley Sorghum	Vegetables Chicken broad beans Milk Whey Olive oil	Rice	Milk powder	Fish generally not used in South and Central parts.
	Central		Wheat-flour Barley Maize flour	Vegetables Meat Whey Olive oil	Rice	Milk powder	
	North (Sinaloa)		Barley Wheat-flour Maize flour Dates Sweet potato	Vegetable oil	Rice	Milk powder	Virgin oil from seeds of Argan tree like olive oil.
65. Mozambique			Cassava Maize flour Sorghum Millet Rice	Peanuts Fish Meat Peanut oil Cottonseed oil	Wheat-flour Dehydrated potato	---	Cereals and tubers consumed in different proportions in different areas.
66. Nepal			Rice Maize flour	Pulses Vegetables Milk Cheese-milk products Yoghurt Mustard oil Butter Ghee	Wheat-flour Sorghum	Milk powder	Beef not acceptable.
70. Papua— New Guinea			Sweet potato Yam Sago	Leafy vegetables Pulses Pork	Maize flour Rice	---	Fish mainly consumed in the coastal and riverine areas.
71. Nicaragua			Maize flour Pulses	Phaseolus autogaris	Wheat-flour	Milk	

Country	Region	Staple	Major Food	Accompaniment	Supple	Accompaniment	Remarks
74 Nigeria	Sudanian Zone (pastoralists)	Millet Dates	Milk Cheese-milk products Butter Meat	—	Wheat-flour Cassava-flour	Milk powder	Pastoralists do not eat fish; pre-harvest food shortage common. Introduction of yellow maize and red sorghum may give some difficulties.
		Millet Sorghum	Peanuts Cow peas/black-eyed beans Meat Vegetable oil	Wheat-flour Maize flour	Dry fish Pulses	Introduction of yellow maize may give some difficulties. Consumption varies according to seasonal supply. In the Sahel and Sudan Zone, pre-harvest food shortages common.	
	Sudanian Zone (Sudanic)	Millet Sorghum Maize flour Rice Cassava	Fish Peanuts Meat	Wheat flour Maize flour	Dry fish Pulses		Milk powder
		Milk Sorghum	Vegetables Peanuts Meat Fish Milk Butter Peanut oil	Maize flour Rice Wheat-flour Cassava	—	—	
74 Nigeria	Sudanic Zone	Sorghum Millet Duro (maize) Cassava Vegetable oil	Vegetables Peanuts Meat Fish Peanut oil	—	Maize flour Rice Wheat-flour Cassava	—	—
		Sorghum Millet Yam Sweet potato Cassava	Cow peas/black-eyed beans Vegetables Meat Fish Vegetable oil	Maize flour Rice Wheat-flour Dehydrated potato Cassava	—	—	
	Forest belt Guinea Zone	Yam Cocoyam Cassava Maize flour	Vegetables Cow peas/black-eyed beans Peanuts Meat Fish Palm oil Sesame oil Butter	Wheat-flour Dehydrated potato Cassava	Dry fish	—	—
		Millet Wheat-flour Dates	—	Rice Wheat, Bulgur	—	—	Pork available. Fish is consumed in coastal communities.
74 Ghana	Northern Population	Sweet potato Cocoyam Millet Dates	—	—	Yam	—	—
		Yam	—	—	—	—	—

Country	Region	Major Food	Staple	Accompaniment	Staple	Accompaniment	Remarks
75. Pakistan		Wheat flour Rice Millet	Pigeon pea Mung beans Split peas, lentils Meat Fish Milk Cheese-milk products Vegetable oil Ghee		Sorghum Maize flour Pulses	Milk powder Pulses	Pork avoidances
76. Panama		Rice Maize flour Plantain	Phaseolus Vulgaris Meat Milk Cheese-milk products Fish Pork fat		Wheat-flour Oats	Milk powder Cow peas, black- eyed beans Butter beans	
77. Paraguay		Cassava Maize flour Wheat-flour Sweet potato	Pulses Meat Milk Peanut oil Soya oil Cottonseed oil		Rice Dehydrated potato	Milk powder	Fish is not known as food
78. Peru	<i>Coscoque Zone</i>	Wheat-flour Rice	Pulses Meat Fish		Barley	Vegetable oil	Fish is not known as a food in the Andean Zone. Vegetable oils and animal fats are used in most of the regions.
	<i>Andean Zone</i>	Potato Wheat-flour Maize flour Wheat-noodles	Pulses Meat Milk		Dehydrated potato Rice Barley Oats	Vegetable oil	
	<i>Humid Tropical Zone</i>	Cassava Plantain	Leafy vegetables Meat Fish		Rice Sweet potato	Vegetable oil	
79. Philippines		Rice Maize flour	Vegetables Leafy vege- tables Fish Pork Coconut oil		Wheat-flour	Mung beans Pulses Split peas, lentils	Pork not consumed in some areas in South.
80. Qatar		Wheat-flour Rice Dates	Meat Milk Sesame oil Butter		Wheat, Bulgur Sorghum	Milk powder	Pork avoidances.

Country	Region	Major Food	Staple	Accompaniment	Acceptable Alternative Staple	Accompaniment	Remarks
81. Rhodesia		Vegetables	Maize flour	Vegetables	—	—	Introduction of yellow maize may give some difficulties.
		Peanuts	Millet	Peanuts	—	—	
82. Rhodesia		Meat	Sorghum	Meat	—	—	Record of famine. Cow's milk popular but not regularly consumed. Fish consumed near lakes at rivers. Dry seasons actually replace cereals in diet.
		Fish	Wheat flour	Fish	—	—	
83. Saudi Arabia	Najd	Peanut oil	Sweet potato	Cottonseed oil	—	—	Pack avoidance. Fish avoidances. Fish consumed coastal communities.
		Cow peas/black-eyed beans	Maize flour	Cow peas/black-eyed beans	—	—	
84. Sierra Leone	Freetown	Phascolus	Cassava	Phascolus	Wheat, Bulgur	Milk powder	Pack avoidance. Fish avoidances. Fish consumed coastal communities.
		—	—	—	—	—	
85. Sierra Leone	Freetown	Leafy vegetables	Sorghum	Leafy vegetables	Wheat, Bulgur	Milk powder	Pre-harvest food shortages common. Peanuts are main cash crops. Introduction of yellow maize at red sorghum may give difficulties.
		Peanuts	Wheat flour	Peanuts	—	—	
86. Singapore		Meat	Rice	Meat	Wheat flour	Milk powder	Pastoralists do not eat fish.
		Fish	Millet	Fish	Maize flour	—	
87. Singapore		Peanut oil	Maize flour	Peanut oil	Dehydrated potato	—	Pastoralists do not eat fish.
		—	—	—	—	—	
88. Sierra Leone	Freetown	Leafy vegetables	Cassava	Leafy vegetables	Wheat flour	Milk powder	Introduction of yellow maize may give some difficulties.
		Peanuts	Rice	Peanuts	Maize flour	—	
89. Sierra Leone	Freetown	Phascolus	Millet	Phascolus	Wheat flour	—	Introduction of yellow maize may give some difficulties.
		—	—	—	—	—	
90. Sierra Leone	Freetown	Fish	Sorghum	Fish	Wheat flour	—	Introduction of yellow maize may give some difficulties.
		Meat	Millet	Meat	Milk powder	—	
91. Sierra Leone	Freetown	Palm oil	Milk	Palm oil	Wheat flour	—	Introduction of yellow maize may give some difficulties.
		—	—	—	—	—	
92. Sierra Leone	Freetown	Leafy vegetables	Rice	Leafy vegetables	Wheat flour	—	Introduction of yellow maize may give some difficulties.
		Vegetables	Cassava	Vegetables	Maize flour	—	
93. Sierra Leone	Freetown	—	Millet	—	Wheat flour	—	Introduction of yellow maize may give some difficulties.
		—	Sweet potato	—	Cassava farina	—	
94. Sierra Leone	Freetown	—	Rice	—	Wheat flour	—	Introduction of yellow maize may give some difficulties.
		—	—	—	—	—	



Country	Region	Major Food Staple	Accompaniment	Acceptable Alternative Staple	Accompaniment	Remarks
87. Somalia	Saidi, Papatayo, and Soray nomads	Sorghum Maize flour	Pulses Milk Butter	Wheat flour	Milk powder	Fish not a common food
		Milk Butter Meat Sorghum	—	Wheat flour	—	
88. Sri Lanka	—	Rice Wheat flour Cassava	Vegetables Milk Fish Coconut oil Pigeon pea	—	Milk powder Split peas lentils Dry fish	
		Wheat flour Rice Sweet potato	Pulses Fish Meat Milk Cheese-milk products	Dehydrated potato	Milk powder	
89. St. Kitts, Nevis and Anguilla	—	Rice Sweet potato Yam Cassava	Pulses Fish Milk Cheese-milk products Meat Vegetable oil	Wheat flour Dehydrated potato	Milk powder	
		—	—	—	—	
90. St. Vincent	—	Rice Sweet potato Yam Cassava	Pulses Fish Milk Cheese-milk products Meat Vegetable oil	Wheat flour Dehydrated potato	Milk powder	
		—	—	—	—	
91. Sudan	N. 24	Sorghum Millet Maize flour	Peanuts Pulses Milk Meat Sesame oil Cottonseed oil	Wheat flour Maize flour	Milk powder	Milk avoidance. Consumption varies according to seasonal supply. Introduction of yellow maize may give some difficulties.
		—	—	—	—	
92. Surinam	S. 24	Millet Sorghum Cassava Sweet potato	Fish Meat Milk Vegetable oil Butter	Wheat flour Rice Dehydrated potato	Milk powder	
		—	—	—	—	
93. Swaziland	—	Rice Wheat flour Sweet potato Cassava	Pulses Meat Fish Milk Cheese-milk products Coconut oil	Wheat-Bulgur Dehydrated potato	Milk powder	Food habits differ among various population groups
		—	—	—	—	
93. Swaziland	—	Maize flour Sorghum	Leafy vegetables Peanuts Meat Milk	Wheat flour Rice	Milk powder	Fish not popular food. Canned fish is accepted (sardines and pilchard). Introduction of yellow maize may give some difficulties.
		—	—	—	—	

Country	Region	Major Food	Staple	Accompaniment	Acceptable Alternative Staple	Accompaniment	Remarks
94 Sierra Leone	Sierra Leone Population	Wheat flour, Butter	Wheat flour, Butter	Peas, beans, Cheese-milk products, Meat, Mutton, Sesame oil, Coconutseed oil	Wheat, Baigin, Rice, Sorghum	Milk powder	Fish is rarely consumed along coasts. Pork avoidances.
95 Liberia	Nomads	Milk, Cheese-milk products, Mflat	Yam, Taro, Sweet potato	Coconut, Fish, Pork	Wheat flour, Rice, Sorghum, Milk powder	—	—
96 Tanzania	Sierra Leone Population	Maize flour, Millet, Sorghum, Plantain, Cassava	Maize flour, Millet, Sorghum, Plantain, Cassava	Vegetables, Peanuts, Corn, peas, black-eyed beans, Phaseolus vulgaris, Meat, Fish	Rice, Wheat flour, Dehydrated potato	—	—
97 Thailand	Peas, beans	Millet, Blood, Milk, Meat	Millet, Blood, Milk, Meat	—	Wheat flour, Rice	—	—
98 Thailand	Nomads	Rice	Rice	Vegetables, Fish, Egg, Peanut oil, Coconut oil	Maize flour, Wheat flour	—	—
98 Thailand	Nomads	Millet, Sorghum	Millet, Sorghum	Vegetables, Peanuts, Meat, Fish, Vegetable oil	Maize flour, Rice, Wheat flour	—	Introduction of yellow maize may give some difficulties. Consumption varies according to seasonal supply. Pre-harvest food shortages common in the North.
99 Trinidad and Tobago	South (Guinea Zone)	Yam, Cassava, Maize flour, Cowyam, Sweet potato	Yam, Cassava, Maize flour, Cowyam, Sweet potato	Vegetables, Peanuts, Meat, Fish, Coconut oil, Pulses, Fish, Milk, Cheese-milk products, Meat	Maize flour, Rice, Wheat flour, Dehydrated potato	Milk powder	The food habits of Creole, Hindu, and Moslem population not same

Country	Region	Major Food	Staple	Accompaniment	Acceptable Alternative Staple	Acceptable Alternative Accompaniment	Remarks
107. Western Samoa		Leafy vegetables Fish Meat Coconut	Laro Banana Breadfruit	Wheat-flour	—	—	
108. Yemen Arab Republic		Chick pea Vegetables Cheese-milk products Butter Vegetable oil	Millet Sorghum Wheat-flour	Rice Maize-flour	Milk powder	Pork avoidances. Fish on coast. Fenugreek is important accompanying item.	
109. Yemen People's Democratic Republic	South	Meat Milk Ghee Vegetable oil	Wheat-flour Millet Sorghum Rice Dates	Wheat-Bulgur Milk powder	Fish consumed on coast.		
	North	Sweet potato Cassava Wheat-flour Millet Sorghum	—	—	—		
110. Zaire	Tropical lowlands of Kasai and Congo basins	Leafy vegetables	Cassava Maize flour Plantain	Rice	—	Introduction of yellow maize may give some difficulties. Vegetable oil, groundnut oil, palm oil are consumed in nearly all regions.	
	Equatorial savanna (South districts)	—	Cassava Plantain Maize flour	Rice Wheat-flour	Vegetable oil		
	Tropical Highlands (Kasai)	—	Cassava Maize flour Millet	Rice Wheat-flour	—		
	Tropical Highlands (Katanga)	—	Maize flour	Rice Wheat-flour	—		
111. Zambia		Vegetables Peanuts Fish Meat Peanut oil	Maize flour Cassava Millet	Wheat-flour	—	Introduction of yellow maize may give some difficulties.	

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SECTION V. Feeding and Nutrition

2C. Supplementary Feeding

A. INTRODUCTION (UNHCR, 1980)

These standards are intended to assist those involved in the planning, implementation and supervision of Supplementary Feeding Programmes, (SFP) in refugee camps.

An SFP should be seen as a community service and a part of the preventive health programme. To be effective, it requires competent management and good cooperation between organisers, agencies, medical personnel and leaders of the refugee population.

In order to facilitate the transition back to their normal way of life, an SFP must utilize foods which are familiar to the population in addition to improving nutritional status.

A Feeding Programme Coordinator will be designated by UNHCR in each camp to liaise between the different groups and to ensure that the guidelines are followed and there is consistency in standards and procedure in all Supplementary Feeding Centers.

Regular meetings shall be held to exchange information and to ensure good cooperation between all those involved.

B. STANDARDS (UNHCR, 1980)

1. The objectives of an SFP are:
  - a) To prevent deterioration of vulnerable groups by providing the extra nutrients needed for growth and lactating mothers' milk production.
  - b) "On-the-spot" feeding of an additional meal to ensure that the right food reaches only the selected group.
  - c) To aid recovery from disease.
  - d) To educate the refugee population as to better nutrition practices.
  
2. The beneficiaries of SFPs in the camps should be:
  - a) Children 5 years of age and under;
  - b) Pregnant and lactating women;
  - c) Malnourished individuals (any age);
  - d) Selected medical cases.

Note: School Feeding Programmes

It is recognized that school-age children (6-13 years) in these populations may be nutritionally deficient. Therefore, where resources and local circumstances permit, a feeding programme shall be created to become an integral part of any school programme set up for refugee populations. This will be based on the nutritional and management principles included in this paper. Coordination of school feeding with supplementary feeding programmes within each camp will be arranged by the UNHCR feeding programme coordinator.

3. The recommended method of feeding in SFPs involves:

"On-the-spot" consumption of cooked food in the SFP center under the supervision of trained personnel. Alternative strategies for on-the-spot consumption may be explored on the advice of the UNHCR feeding programme coordinator.

4. Meal Composition:

- a) The meals must be adapted to the food habits of the refugee population. Only foods, recipes and locally available produce, familiar to the refugees will be used, except under the circumstances outlined in (c) below.
- b) Fresh fruit and/or vegetables should ideally be provided daily, where feasible.
- c) Special cereal-based foods may be used for the supplementary feeding program. (See Annex I.)
- d) Dried skimmed milk and other milk products should ideally be used as ingredients in cooked meals. (See Annex II for a full discussion of the issues related to the use of milk powder as a food for vulnerable groups).
- e) A drink should be provided to satisfy thirst, e.g. safe water, fruit juice, tea, etc.

5. Nutrient Content of SFP Meals

- a) Foods are selected for their particular nutritional value. An appropriate ration is, for example:
  - 40 g dry skim milk (160 kcal) plus  
50 g cereal-based special food (Annex) or rolled oats (200 kcal)  
or
  - 100 g rolled oats or cereal-based special food (400 kcal)  
or

- 40 g dry skim milk plus 20 g oil (total: 340 kcal).

- b) As a guideline: around 350 kcal and 15 g protein constitute a usual portion in a relief programme.
- c) The fat content of the meal should be not less than 20% to achieve a high energy density. Note: small children have a small gastric capacity which limits the volume of food they can eat at any one time. For this reason, the aim is to provide the maximum amount of energy and protein in the smallest bulk possible. In this respect, dried, full-cream milk powder is more useful than dried skimmed milk due to the fat content of the former.

#### 6. Feeding of Small Children

- a) Breast feeding must be encouraged, with particular attention paid to lactating mothers and their infants. Note: bottle feeding in developing countries has been associated with infant mortality.
- b) BOTTLE FEEDING WILL NOT BE ALLOWED UNDER ANY CIRCUMSTANCES.  
The advice of the pediatric/nutrition staff can be provided if necessary. A cup and spoon, maintained in hygienic condition, will be used when milk is given in liquid form as one of the supplementary foods.
- c) Rations for night feeds should only be distributed under medical supervision.

7. Food Preparation

The area for food preparation must be kept hygienic. This will be the responsibility of a designated supervisor.

8. Food Distribution

Congestion at mealtimes can be avoided by dividing the beneficiaries into groups or categories who attend feeding at different times of the day.

- a) Each beneficiary must be able to sit in an adequate space to eat his meal.
- b) Each beneficiary should be allowed to satisfy his immediate appetite at each meal.
- c) Those with poor appetites should be closely supervised and encouraged to eat as much as possible (small children require particular attention, with help, where possible, from their own mothers).
- d) Generally, each beneficiary receives one meal per day. Selected cases may be given 2 or more meals per day.
- d) Feeding will be conducted on a daily basis.

9. Staffing and Supervision of SFP Personnel

- a) A plan for the staffing of the SFP must be developed by the agency. This must be approved by the nutrition coordinator.
- b) The training and supervision of refugee volunteers and national health ministry staff is the responsibility of the agency working in the SFP.



- c) A schedule for increasing the involvement of responsibility of national health ministry staff in the SFP will be developed by the agency and approved by UNHCR/ICRC.
- d) Where necessary, a translator should be assigned to each center to allow communication with expatriate personnel.
- e) One "model" Center in each camp should be used for staff training.
- f) A designated representative of each agency involved in the SFP must be present during all activities related to supplementary feeding.

10. The facilities required for SFP are:

- a) An enclosed area designated as the feeding site. Where large numbers of beneficiaries are to be fed, facilities should include separate entrance and exit.
- b) A sheltered area where people can sit to eat.
- c) A kitchen with stoves, fuel and necessary utensils.
- d) A reliable water supply with drainage system.
- e) A garbage disposal system approved by UNHCR.
- f) A secure food store with hard surface floor.
- g) A reliable food supply system.
- h) A designated area for an advisory room.

11. The location and size of the SFP site

This must be chosen according to the lay-out of the camp with the precise "catchment area" clearly defined. Ideally, it should be:

- a) Close to an outpatient department (OPD) to facilitate cooperation between the 2 services.
- b) Cater for not more than 3,000 beneficiaries.

12. Registration of beneficiaries

New admissions should be advised to attend at a certain time for registration and individual advice.

A registration book should be kept in each center. This book is used to record the following information for each beneficiary:

- a) A registration number.
- b) Name, age and sex.
- c) Date of admission to the programme.
- d) Category (e.g. under 6 years, pregnant, etc.)
- e) Referred or not? (e.g. from OPD, IFW, etc.)
- f. Group leader or household number (if available to facilitate home visits).

13. Individual ration cards

In the SFP system, ration cards are necessary (see Fig. 15). In a programme of supplementary meals for all children in a camp, cards should be avoided as they damage easily.

## SUPPLEMENTARY FEEDING CARD

NAME	SEX	AGE	HEIGHT	WEIGHT	DATE	REMARKS
	<input type="checkbox"/> F <input type="checkbox"/> M					
FATHER'S NAME						
MOTHER'S NAME						
		AGE	HEIGHT	WEIGHT	DATE	
		1-11	2			
		2-12	22			
		3-13	21			
		4-14	20			
		5-15	19			
		6-16	18			
		7-17	17			
		8-18	16			
		9-19	15			
		10-20	14			

NOTE: Use the following table to record all or some of the data: weight, height, weight for height, weight for age, etc. by local equipment.

Figure 15

In supplementary feeding programmes for selected groups of children, the point of checking is not to prevent children from being served twice, but to ascertain their regular attendance at meals.

These children should have individual cards and be listed in a register by camp sector, so that helpers can easily find them if they fail to show up. As children in this category are normally taken to meals by their mothers or elder sisters or brothers, their cards should suffer less in handling. It is useful to have a combined card for feeding and follow-up (Fig. 15). (de Ville de Goyet, et al., 1978).

#### 14. Preventive Health Programme

The preventive health programme will develop gradually with emphasis on particular aspects according to the needs in each camp. These guidelines indicate the scope of such a programme.

The SFP is intended to be the focal point of the preventive health programme run in close collaboration with the OPD and public health personnel. Any agency involved in an SFP should provide the necessary medical personnel or collaborate closely with another agency in the provision of this service.

Volunteer staff should play a major role in every aspect of this programme, and training schemes for extension workers should be initiated as soon as possible.

- a) Home visiting: every household in the SFP catchment area should be visited to refer beneficiaries to the feeding center (or OPD if necessary). Follow-up visits should be made at regular intervals, particularly where domestic problems have been found. Where

a beneficiary has been absent from feeding for 2 consecutive days (NB use of daily attendance register) a follow-up home visit should be made.

b) "Under 5s clinic": \*Health cards will be used to record the progress of each child. Explanations must be given to all mothers on the purpose and value of the cards.

i. Nutritional surveillance will be carried out through the regular measurement of height and weight of the children 5 years of age and under. This information may, where necessary, be supplemented by, or substituted by, measurements of arm circumference and/or use of the QUAC stick. This information will be collected and maintained on suitable charts. \*For a detailed discussion of nutritional surveillance methodologies, see Chapter 4, PAG, 1977; Chapter 3, de Ville de Goyet, et al., 1978; WHO, 1978.

The orderly maintenance of nutritional surveillance data will be the responsibility of the Feeding Programme Coordinator in each camp.

ii. Immunization programmes\* will be under the direction of the medical coordinator. Immunization programmes will be undertaken in all camps. The designated authorities will issue a set of recommendations in the management of such programmes, which should be carried out in complete cooperation with the local medical coordinator.

- c) Advisory room: this facility should be arranged for those with particular problems, e.g. malnourished children or women with failure of lactation. This allows time for special attention and advice and extra meals if necessary.
- d) Assessment of progress of the malnourished: this entails the regular weighing of those classified as malnourished on admission to the programme. This information must be recorded in the SFP register at 2-week intervals, and will be reviewed regularly by the nutrition coordinator.
- e) Public Health Education: regular, informal, health and nutrition education sessions for small groups of women should be organised. Discussions and practical demonstrations can cover a variety of topics (see Section IV, Chapter 18 of this Workbook).
- f) Mass distribution of medicines such as vitamins\*, iron preparations and de-worming agents should be distributed under the direction of the medical coordinator.

\*Note: Medical/nutrition authorities agree that any vitamin or mineral deficiency should be treated selectively. Multivitamin preparations do not contain enough of any vitamins to be useful in treatment of a vitamin deficiency syndrome. For this reason, the mass distribution of multivitamin is not recommended. Any decisions concerning the large scale distribution of specific vitamins (esp. Vit. A) will be made under the guidance of the medical or feeding programme coordinator in each camp.

15. The long-term need for SFP

This will be determined through a system of nutritional surveillance. A surveillance programme of a regular systematic basis should include sample surveys of housing inspection and other methods to be determined by the UNHCR nutrition officer. (The weighing and measuring of children in under 5's clinics will be an integral part of the surveillance programme.)

As conditions allow, the SFP facilities may be made available for other purposes as coordinated by UNHCR.

C. ORGANISATION (UNHCR, 1980)

The organisation for the management of the supplemental feeding programme is as follows:

1. UNHCR Nutrition Officer

The nutrition officer shall be a nutritionist, dietician or medical person trained or experienced in the operation of relief feeding programmes. This person will be a member of the UNHCR operations staff, not a representative of one of the voluntary organisations.

The nutrition officer shall be the final authority for all questions regarding suitability of foods, diets, recipes, organisation of feeding programmes, facilities and personnel in the SFPs.

The nutrition officer shall be responsible for overall assessment of the nutritional status and needs of the camps. He shall set up and implement the regular surveillance systems and shall conduct periodic briefings on his findings to the volags conducting the individual feeding programmes.

2. Nutrition Advisory Committee (NAC)

An NAC shall be established to advise the UNHCR nutrition officer on matters relating to the conduct of the feeding programmes. The committee shall be made up of representatives of the agencies involved in feeding within the camps. The convenor shall be a representative of UNICEF.

3. Camp Feeding Programme Coordinators (FPC)

In each camp, a feeding coordinator will be designated by the UNHCR nutrition officer. In the smaller camps, the coordinator may be a representative of one of the voluntary or UN organisations working in the camp. However, in the larger camps the FPC will be a UNHCR staff member and will be a part of the camp administration. The FPC in each camp will be responsible for seeing that all organisations in the camp SFPs meet the UNHCR standards. To do this, he will carry out periodic inspections of the SFCs, their records, and their surveillance statistics.

The FPC will advise the nutrition officer of any problems in logistics, personnel or non-compliance by agencies with the standards.

4. Camp SFP Coordinating Committee

In larger camps, whenever 3 organisations are involved in the SFP, a coordinating committee will be established to advise the FPC on problems relating to the SFP, especially logistics, facilities, personnel and qualities of foods.

5. Lead Agencies

The UNHCR shall designate a lead agency in each of the camps to serve as the "model" agency for the delivery of services in that camp. All agencies in the camp offering supplementary feeding shall duplicate the services, schedules and routines of the lead agency.



6. Nutrition Advisory Committee - Supplementary Feeding Subcommittee

A representative from each agency conducting supplementary feeding services in the camps will be delegated by the agency involved to serve on the NAC Supplementary Feeding Subcommittee. The subcommittee members will report to the NAC regarding compliance with the standards.

D. ROUTINES (UNHCR, 1980)

1. Feeding Schedules

The daily schedule for SFPs in each camp shall be developed by the camp FPC with the advice of the camp SFP coordinating committee.

All operations within the same camp should be carried out on approximately the same schedule.

2. Surveillance

Each SFP shall conduct the surveillance activities listed in the standards on a monthly basis. A monthly report shall be compiled and forwarded to the FPC who will verify the reports, if necessary.

The FPC will prepare a summary for the entire camp on the SFP Periodic Report Form and present it to the nutrition officer. This shall be recorded in the Policy and Standards Implementation Book.

E. JOB SPECIFICATIONS (UNHCR, 1980)

- I. Title or Position: UNHCR Nutrition Officer
  - A. Supervisor: Designated by UNHCR.
  - B. Subordinates: Feeding programme coordinators in each refugee camp.
  - C. Duties:
    - To ensure that the UNHCR standards in the Supplemental Feeding Programmes are met.
    - To ensure that the supplies necessary to maintain the standards are procured on a timely basis by preparing estimates of food needs for the procurement officer.
    - To provide the training necessary to ensure that all agencies operating nutrition programmes are able to meet the standards.
  - D. Responsibilities
    - To monitor the nutrition status in each of the camps and to prepare a monthly summary of the nutritional status on the UNHCR Periodic Report Form.
    - To periodically report on the quality of the foods being delivered in the Supplementary Feeding Programmes.
  - E. Coordinate Work With:  
WFP, health and related team leaders of the UN agencies and the volags in each camp.
  - F. Maintains Communications With: The Nutrition Advisory Committee.
  - G. Maintains Communications By: Attendance at all meetings of NAC.

2. Title or Position: Feeding Programme Coordinator (FPC)
- A. Supervisor: UNHCR Nutrition Officer.
- B. Subordinates: Participating agencies in the UNHCR feeding programme.
- C. Duties:
- To ensure that all agencies in the camp meet the UNHCR feeding and nutrition standards for Supplemental Feeding.
  - To advise on problems relating to feeding and nutrition in the camp.
  - To advise on any supply problems that occur.
- D. Responsibilities:
- To monitor the nutrition status in the camp.
  - To check the surveillance and record keeping of the participating agencies.
  - To check the hygiene at each SFP in all phases of feeding.
  - To ensure that adequate training is given to all volunteer staff.
  - To ensure that feeding operations are carried out in a regular, daily routine.
- E. Coordinates Work With: Volags, WFP, camp SFP coordinating committee.
- F. Maintains Communications With:
- UNHCR Nutrition Officer, Nutrition Advisory Committee, FPCs in other camps, each SFP.
- G. Maintains Communications By:
- Periodic reports, one monthly visit for FPC meeting.

# Annex I :

## Special foods cereal-based

(de Ville de Coyet, et al., 1978)

Relief workers are often sent unfamiliar processed foods. Special foods are convenient but should supplement, not replace, the local diet.

In general, 100 g of special food provides approximately 360 kcal<sup>1</sup> and 20 g of protein. Vitamins are often added.

The most common of the special foods are the dried milks (skimmed, that is, with no vitamins A-D, unless fortified, or full-cream with vitamins A-D), the blends such as Corn-Soy Milk (CSM) and Wheat-Soy Blend (WSB), and the parboiled cereals (bulgur wheat).

Inappropriate foods must be returned or destroyed.

During emergencies, relief workers are often sent unfamiliar processed foods.

Foods prepared locally with local ingredients are preferable to imported special foods and are best adapted to the specific cultural conditions.<sup>2</sup>

Most special foods are intended for vulnerable groups as supplements to the local diet. They should not replace the traditional diet but supplement it. Processed foods are very convenient to distribute and prepare.

Special imported foods should be replaced as soon as possible by locally grown and prepared supplements of the same nutritional value.

Blended foods may not be familiar to the population. Prepare a demonstration in which all the ingredients are displayed separately. When given without an explanation or a demonstration of how to cook them, they may be thrown away.

<sup>1</sup>For recipes, see CAMERON, M. & HOLVANDER, Y. *Manual on feeding infants and young children*. 2nd edition. New York: Protein-Calorie Advisory Group of the United Nations System, 1970.

## MANAGEMENT OF NUTRITIONAL EMERGENCIES

TABLE 4. SPECIAL PROCESSED FOODS

Type of food	Average nutritional values # per 100 g		Minimum cooking time in water after adding to boiling water	Remarks
	MJ (kcal/g)	Protein (g)		
<b>Blands of cereals legumes, and dry skim milk</b>				
CSM (corn-soy Milk)	1.6-3.70	20	5-10	CSM and WSM are supplied in 22.5 kg multiwall paper bags (the outer wall is impregnated with insecticides and moderately resistant to moisture), dimensions 51 x 84 x 25.5 cm.
Instant CSM	1.6-3.60	20	Instant CSM is fully pre-cooked ready to mix.	
WSM (Wheat Soy Milk)	1.5-3.60	20	5-10	
Superalime (Arapim only)	1.4-3.40	20	5-10	
Falla (Thapar only)	1.4-3.40	20	5-10	
<b>Blands of cereals and legumes</b>				
WSB (Wheat Soy Blend)	1.5-3.60	20	5-10	These foods do not contain cow's milk.
SE (Soy Fortified Bengal)	1.5-3.50	17	20 less if soaked over night	Vitamins and minerals added to WSB, SF, CM, incapanna, balabar and SWF.
SE (Soy Fortified Corn Meal)	1.6-3.90	13	15	SF meal is not a flour (cracked grains of Bengal wheat).
SE (Soy Fortified Sorghum meal)	1.7-3.60	16	15	
SE (Soy Fortified Millet 12%)	1.5-3.60	16	15-20	
SE (Soy Fortified Boro millet)	1.6-3.70	21	5-10	
incapanna (Central America)	1.6-3.70	28	5-10	
balabar (India)	1.2-3.60	22	5-10	
<b>Other blands</b>				
SE (Supplement enriched flour) (Wheat 10% DFM, 50% oil)	1.7-4.00	20	5	Keep well for about 9 months.
Supplement enriched DFM (10% oil)	2.2-4.30	15	1 hour pre-cooked	
<b>Milks and fish protein concentrates</b>				
DSM (dry skim milk)	1.5-3.50	35		Milks have a high lactose content. DSM contains no vitamins A or D, unless this is mentioned on the bag.
DFM (Dried Milk concentrate - whole milk)	2.1-5.00	25		Milks provided by UNICEF, USA and Canada are usually enriched.
DFCM (dehydrated condensed milk)	1.4-3.20	13	1 hour pre-cooked	DFCM does not store well once a container has been opened (rancidity).
EPC (fish protein concentrate) type A	1.5-3.60	25		EPC type A does not smell or taste of fish but is more expensive than type B.
type B	1.4-3.40	25		
<b>Cereals</b>				
Bengal wheat (whole grain)	1.5-3.50	11	20 less if soaked overnight	

# Values in MJ rounded to one decimal place on conversion from kcal/g.

## SPECIAL FOODS

Some foods sent as emergency relief are inappropriate for cultural reasons (religion, food habits, etc.), or because of unsuitable packaging (e.g., 25% of the weight of the small bottles of vegetable mash for infants is made up of water and glass) or low nutritional value (sweets, luxury foods, etc.). Do not waste fuel and effort in distributing food containing only minute amounts of proteins and calories. Give it away to a local institution. If it is not acceptable, return or destroy it. Always inform your supervisors and the donor's local representative if donated supplies are inappropriate. This will help to improve the quality of later consignments.

## Nutrient content of some commonly used special foods

The composition of special foods, as indicated in Table 4, varies with the availability and cost of the ingredients. However, the nutrient content remains *approximately* constant. All cereal-based formulas have a variable protein content, and the values shown are the lowest which occur.

Dried skim milk (DSM) is used as a high-quality protein source in most formulas. When only small amounts of milk (e.g., 50 g of DSM) are given daily, lactose intolerance will *not* be a significant problem among the general population.

Vitamins and minerals are usually added to most (but not all) processed foods so that 100 g of dry product meet the daily recommended allowance. DSM contains no vitamins A-D unless they have been added during processing (a measure increasingly adopted by supplying countries).

Whole cereals (e.g., bulgur wheat and SF bul) retain a high amount of B vitamins (e.g., thiamine).











Most processed foods are partially precooked, some are *fully* precooked and are called instant or ready-to-mix foods (DSM, DPCM, instant CSM, Semper I, etc.). Fully precooked foods are very convenient (since they can be cold-mixed) but they must be made up freshly *each time they are served*, especially if they are made up with unboiled water. Germs do multiply very quickly (within one to two hours) in a cold mixture of instant food and water, since there they find everything they need—water, sugar, proteins, etc.—at an ideal temperature. A food mixture contaminated by unsafe water becomes after a while much more dangerous than the water itself.

Instant foods must be

- prepared just before meal-time with boiled water
- or added to a porridge (gruel, etc.) after its preparation
- or eaten in a dry form (DSM, FPC, etc.)
- or added to the normal diet (e.g., to soup).

## MANAGEMENT OF NUTRITIONAL EMERGENCIES

To facilitate identification of the contents of the food bags, once they are piled up in the warehouse, a special colour code was recently devised. Red is used for soy-fortified foods and blue for other commodities. The most usual symbols (printed on the sides of the bags) are as follows:

CORN SOY MEK (CSM)		Red
INSTANT CORN SOY MEK <sup>1</sup>		Red
WHEAT SOY BLEND (WSB) <sup>1</sup>		Red
CORN MEAL		Blue
SOY FORTIFIED CORN MEAL		Red
SOY FORTIFIED FLOUR 6%		Red
SOY FLOUR (TOASTED, DEFATTED)		Blue
SOY FORTIFIED FLOUR 12%		Red
ROLLED OATS (OATMEAL)		Blue
SOY FORTIFIED ROLLED OATS		Red

<sup>1</sup> Sweetened and flavoured instant CSM and WSB are sometimes donated; they are identified by distinct symbols.



## SPECIAL FOODS

## Preparing special foods

Always try cooking a small sample yourself to make sure the recipe works.

*Cereals*

Bulgur wheat and SF bul are not in powder form but in cracked whole grains, precooked to reduce cooking time and increase storage stability.

Add sufficient water to cover the grains in the pot.

Soak for a few hours (overnight).

Boil the cereals in the same water (B vitamins are present in this water) for 10-15 min (20, if no soaking).

Do not wash or rinse the grains after cooking.

If the cereal is not cooked long enough, it is poorly digested by children.

Pound finely (mash) for young children.

Proportions are about 1 part bulgur, 2 or 3 parts water. The volume more than doubles in cooking.

The same principles apply to most locally grown cereals.

*Special blends (in powder form)*

1. First mix one part of CSM or other blends with two parts of water (it is important, always to use *cold* water). *Slowly* add the special blend to the water *while stirring*. If the mixture is lumpy, continue stirring until it is smooth.

To use in *porridge* form, pour the smooth mixture into an extra part of water. Boil for 8-10 min, stirring all the time. The porridge should be thick to provide enough proteins and energy per portion.

To *enrich the usual meal*, add the smooth mixture. Keep cooking and boiling (while stirring) for 5-8 minutes.

2. CSM and other blends can be used as dry ingredients partially replacing cereal flours in almost every local dish (breads, tortillas, chapatis, etc.). Depending on local cereal availability and acceptability, the proportion can vary from 20% to 50%. Try locally with a sample mixture first, as well as oil and water content, should sometimes be increased.

3. Instant foods, e.g., instant CSM, can be added to *cold boiled* water and served immediately without cooking.

4. Whenever possible add 30-40 g of edible oil per 100 g of the *dry* blend to increase the energy content. Mix and stir thoroughly. The mixture (dry blend plus oil) can be stored for a few days in a dry place. After addition of water and cooking, consume within a few hours.

*Dried milks (DSM, DFCM)*

Reconstitute milk with one part of dry milk to 4 parts of water.

First take a small amount of *cold water* (1-2 parts), then slowly add DSM or DFCM and keep stirring until the solution is smooth. Add the remainder of the water (boil for 3-5 min if it is contaminated). If the DSM is in bulk, add milk powder to boiled cold water and whisk until powder is well dissolved.

Dried milk can be added directly to porridge during preparation or before serving. Stir well.

## MANAGEMENT OF NUTRITIONAL EMERGENCIES

Dried skim milk (6 parts), oil (2 parts) and sugar (1 part) can be mixed together and stored for up to one week. 1 part of the mixture added to 4 parts of water gives a high-energy liquid food with 100 kcal and about 4 g protein per 100 ml.

*Concentrated or condensed sweetened milk*

The milk should be diluted because of the high sugar content (43%). Protein should be added because of the low content after dilution.

Use the tin as a measure. Mix three tins of water to the contents of one tin of concentrated sweetened milk. For a standard size tin (content 400 g) add 30 g of dry skim milk (three full teaspoons) to half a can of water. Mix together and stir well. Boil for 3 min if the water is not safe. The final preparation (1350 ml) contains 115 kcal, 4.5 g protein, and 2.4 g fat per 100 ml and should be served without delay.

Condensed milk should not be confused with evaporated milk (unsweetened) which can be reconstituted by adding boiled water.

*Fish-protein concentrates (FPC)*

These can be added to traditional dishes or consumed without any preparation, even by infants. When accepted, they are a high-quality source of protein.

ANNEX IIISSUES IN THE PROVISION OF MILK  
AS A NUTRIENT FOR INFANTS AND CHILDREN

Although milk has long been considered an ideal food in human nutrition, recent research has seriously challenged the use of milk powder in the Third World. Usage of milk or milk-based formulas in developing countries leads to a special set of problems. Although powdered cows milk or milk-based formulas are acknowledged to be an easily transportable food with good protein and calorie density, it has, in the refugee situation, certain disadvantages. A summary of the issues is as follows:

1. Breast milk

A number of studies over the past 70 years have clearly documented the advantages of breast-feeding. Safe preparation and use of milk powder or milk-based formula requires a clean water supply and refrigeration, two items in short supply.

By contrast, breast milk is safe, clean, requires no preparation and is normally available in adequate amounts. Breast milk is the uniquely appropriate food for infants, conferring good nutrition and a degree of immunity to disease, and assuring adequate growth. Breast milk is adequate for the infant's needs until four to six months of age. After that time, first liquid, then solid food supplements are required to keep up with the child's nutrient requirements. It is due to the vulnerability of the young child when this supplementation begins, often in unhygienic conditions, that the high risk of infection and possible death results.

## 2. Lactose intolerance, of lactase deficiency

Lactose is a sugar present in large amounts in cows milk. Persons who lack the enzyme lactase have been identified as being unable to digest this sugar (lactase deficiency). When the lactose passes through the digestive system without being digested, it often causes diarrhoea. If the diarrhoea is not adequately controlled, in time the condition may lead to dehydration and ultimately death. Certain populations exhibit more lactase deficiency than others; in populations where milk is a common food, lactase deficiency is extremely rare. In populations where milk is not used extensively, proportions up to 25% of the population (invariably more adults than children) exhibit lactose intolerance. This suggests that lactase production diminishes with age as the adult becomes unaccustomed to drinking milk. There is evidence to suggest that children regain lost lactase production after being reintroduced to drinking milk; only one or two diarrheal episodes may result. Persons who react adversely to milk may not continue to return for subsequent supplementary feedings.

## 3. Hygiene

The sale and distribution of milk powder has been cited as one of the major contributors to the contemporary high incidence of infant mortality. The use of DSM depends on a safe supply of water for mixing the powder, for washing the containers, and for serving the milk. It also demands a high standard of hygiene on the part of the feeder. If any one of these is not clean, disease may result. For this reason, several developing countries have banned the sale of DSM.

4. Economics

Families which have become dependent on milk powder or milk-based formulas may, when economically or logistically disabled, over-dilute the formula to make a larger but calorie dense supply. In this situation, PEM may quickly result.

5. Appropriateness

Cow's milk may not be part of the traditional local diet.

6. The distribution of tinned milk (infant formula, condensed or evaporated).

All these milks create the same problems as DSM, especially if they are to be diluted.

ANNEX III: ORGANISATION OF COOKING FACILITIES FOR SFPs.

(de Ville de Goyet, et al., 1978)

First, a few questions have to be answered:

1. How many meals are to be prepared at a time?
2. How long in advance can each type of food be prepared?
3. Can the staple food be prepared in a single large batch (e.g. boiled rice), or does it have to be prepared in individual form (e.g., chapatis, tortillas, bread, etc.)?

A. Kitchens

Kitchens should be set up inside buildings wherever possible. It is often possible to construct a suitable shelter cheaply in the form of either a "lean-to" against some other building or consisting of a roof of thatch or corrugated iron supported on uprights. Except where kitchens are very small, the area should be fenced off to prevent access by the general public. It is always advisable to have as much space as possible for water storage, the washing and cleaning of food, any initial preparation that is required, cooking, the short-term storage of prepared food, and washing up. In a large camp, one kitchen should be set up for each 400 - 500 families or 3000 people.

B. Personnel and Equipment

Personnel should include cooks (the number would depend on the type and amount of food), cooks' assistants (for cleaning vegetables, making fires, carrying water, etc.), cleaners, and people to wash up. Employ residents of the camps as much as possible (see camp administration, Chapter 8).

Methods of cooking a given staple food usually vary according to the country and even within countries. Local methods and suitable equipment should be employed.

Clearly, foods that can be cooked in bulk will require large receptacles; where large amounts of staple foods have to be baked or fried in individual portions, a larger number of smaller utensils and more personnel will be required.

1. When the food is to be prepared in individual portions, it is necessary first to determine how long each one takes to prepare. This can be done by timing the preparation of, say, 10 portions by a local cook and then calculating from this the number of cooks, utensils, and cooking points required as follows:

- Number of portions required for three meals =  $1000 \times 3 = 3000$
- Number cooked by one cook in one hour = 100
- Number of cook hours required = 30
- Time available for preparation = 6 h
- Number of cooks required =  $5+2$  (for rest periods)  
= .7

2. When a food is prepared in bulk, calculate as in the following example:

- Individual (dry) quantity of food = 100 g per meal
- Maximum volume when cooked = 250 ml
- Number of people to be fed at one meal = 1000  
assuming that the food must be freshly prepared for each meal, then total volume to be prepared twice daily = 250 l

This in practice means that at least two cooking pots about the size of a cut-down petrol drum (200 l) (Fig. 14) and two cooks would be required.

Additional utensils are required for:

- Cooking soup (calculate in the same way as for staple food in bulk)
- Mixing, serving, or cleaning ingredients prior to cooking
- Fermentation (for example, injera, yoghurt, curd) where this is required
- Mixing and serving implements

At the outset, make a rough calculation of the other utensils required and add to these as experience is gained.

#### C. Fires and Fuel

If local fuels are being used, e.g., wood or cow dung, then the local system of fire-making is usually the best and should be adopted. If firewood is difficult to obtain, each person or family should be asked to bring one piece to each meal.

#### D. Hygiene and Food Storage

The kitchen and its surroundings must be kept clean. Adequate facilities for the disposal of waste must be provided. It is usually best to employ one or more full-time cleaners and to make them personally responsible for this.

Avoid storing cooked food for any length of time, particularly if the food involved contains meat or other animal products. Some types of local staple foods can be kept safely in an edible condition for several days. Cold-mixed foods, e.g., dried skim milk, should always be made up freshly before



use, ideally with boiled, cooled water and should never be kept standing or in an uncovered container for more than a few minutes.

#### ORGANISATION OF MEAL DISTRIBUTION

##### A. Distribution of Cooked Meals to Families

The registration of families who are to receive cooked rations is similar to the registration procedure for dry ration distribution.

A representative of each family presents a card indicating the number of people to be fed in the family. The ration for the family is measured into a suitable container and the card marked to indicate that the ration has been allocated. It should be remembered that the ration of grain per person will increase in both weight and volume after boiling and the ration should be adjusted accordingly.

In a large community or camp where there are several kitchens and distribution centers, it is important for recipients to know which kitchen they are to attend for feeding. The feeding supervisor should keep a register of all those to be fed from his kitchen. Should a control be necessary, the information in the register should correspond to that on the family feeding card. The card should be marked, or preferably, stamped with the kitchen number. Kitchens should have the number clearly displayed.

##### B. Distribution of Cooked Meals to Individuals

Food distributed to individuals should be eaten in an enclosed area under supervision. This is to ensure that all members of the family

(particularly the children) eat an adequate ration. This procedure is only practicable in smaller shelters or communities where no more than a few hundred people are to be fed.

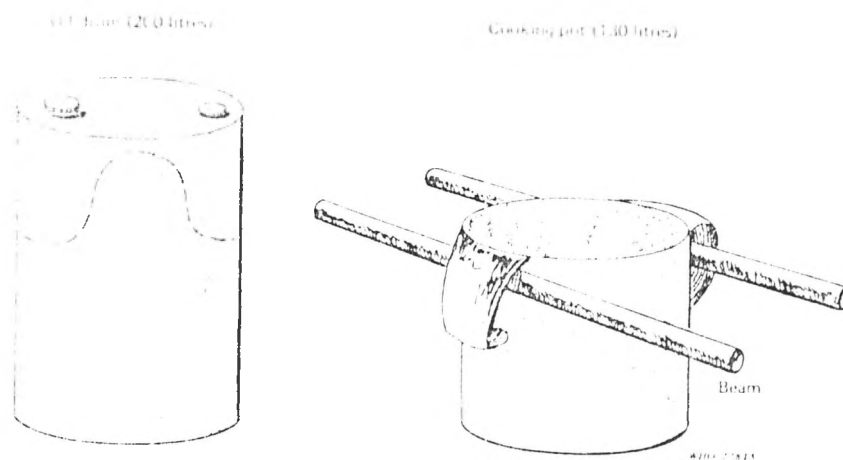
A large enclosed area should be constructed, where all the people can assemble at set times each day; alternatively, a school-hall or some other suitable building could be used.

If the entire population of the camp or community is to be fed in an enclosed area, no registration card system should be necessary, although those attending should be counted each day.

Only where selective feeding is to be carried out should cards be issued to those in need of feeding.

At well-controlled institutions or camps, plates might be given to each person individually. Either arrange for these to be washed centrally or provide facilities for each person to wash his own.

FIG. 14. HOW TO USE AN OLD DRUM AS A COOKING UTENSIL



1. Cut the drum in two along the dotted line and bend the two sides outwards to permit easy transport with a person if wood or metal.  
 Alternative: Cut the drum in half to form two 100-litre cooking pots.

SECTION V. Feeding and Nutrition

21. Intensive Feeding

A. INTRODUCTION (UNHCR, 1980)

UNHCR must coordinate the efforts of the numerous non-governmental organizations providing services in refugee camps. Setting basic minimum standards on each service supplied, providing guidelines on delivery of these services and a basis for standardized reporting and monitoring, is necessary to ensure uniformity of services delivered.

The objectives of the UNHCR manual of Guidelines for Intensive Feeding Programmes (IFP) in refugee camps are:

- to ensure that all services involved meet a basic minimal level of quality
- to ensure that all services are provided in a uniform manner
- to provide the basic information necessary to successfully implement the UNHCR standards
- to standardize routines and to facilitate reporting and monitoring
- to provide a guide for those who have had no prior experience in this field

UNHCR Guidelines for Intensive Feeding Programmes in Refugee Camps

These guidelines are intended to assist those involved in the planning, implementation, and supervision of Intensive Feeding Programmes (IFP) in the Kampuchean camps.

Much of the following information has been provided from the Recommended book: The Management of Nutritional Emergencies in Large Populations by C. de Ville de Goyet, I. Seaman, and V. Geijer, WHO publication (pages 50-58)

An IFP will be seen as a part of the medical complex. To be effective, it requires competent management and good co-operation between organizations, agencies, medical personnel and leaders of the Khmer population.

To reduce deaths among infants and young children with severe protein energy malnutrition (PEM), an IFP must provide therapeutic feedings of suitable preparations, education of mothers and staff, and monitoring status of patients with emphasis on prevention.

These guidelines are specifically concerned with the care of children with severe protein energy malnutrition and prevention of PEM. The techniques outlined here are not suitable or necessary for the management of malnourished adults. Malnourished adults are better cared for in a "Rehabilitation Ward" where diets are based on local foods and normal meal times but where extra food supplements are given between meals. A rehabilitation ward is a useful and often essential part of the hospital complex where large numbers of malnourished or debilitated adults would otherwise be occupying needed hospital beds.

1. The objectives of an IFP are:

- a) to reduce deaths among infants and children with severe protein energy malnutrition by providing therapeutic feedings of high nutritional value
- b) to rehabilitate severely malnourished infants or children
- c) to aid recovery from disease
- d) to educate the mothers and staff as to nutritional practices necessary for the prevention of malnutrition and the rehabilitation of severely malnourished infants and children

2. Co-ordination of Intensive Feeding Programmes

Intensive Feeding in refugee camps is the responsibility of the Medical co-ordinators and the feeding centres are considered as part of the hospital complex.

3. The Need for Intensive Feeding

Careful consideration should be given to the establishment of separate Intensive Feeding facilities since they are expensive in terms of material and personnel. It should be realized that all but the very worst cases of malnutrition (PEM) can be adequately rehabilitated in an effective Supplementary Feeding Programme (SFP). Priority should always be given to the provision of a good SFP to prevent others deteriorating to the state which necessitates intensive feeding.

Where such lif-saving measures are necessary it should be appreciated that for a static camp population with good general food distribution and a good SFP, Intensive Feeding should only be necessary for about 3 months i.e. the period taken to gather together and treat all those children arriving at the camp with severe PEM.

4. The Numbers Requiring Intensive Feeding

It is helpful to carry out a simple survey in the camp (or at screening procedure as the refugees arrive at the camp) to determine the likely numbers of severely malnourished in the population.

For ease of management it is preferable to limit the Intensive Feeding Centre (IFC) to no more than 100 beds. If the requirement is greater than this, then a separate facility should be set up.

## 5. Facilities for Intensive Feeding

The IFC should be a separate building, near but independent of the Paediatric Ward. It is difficult to manage severe PEM in the setting of a Paediatric Ward since feeding schedules must be rigid and feeding procedures are very time consuming.

Ideally the IFC should consist of 2 or 3 separate buildings made of local material. One of the buildings would be used for newly admitted severe cases and have medical facilities. The children (and mothers) are accommodated in one single building. Close supervision by qualified personnel, nurses, for instance, is required on a full time basis. As the children improve they will progress from the acute ward into the other houses which also have accommodations for the children and accompanying relatives. Feeding is provided by the mothers under the supervision of auxiliaries. Qualified supervision is required on a periodic basis (detection and prevention of complications). Meal schedules will be adjusted until the children are ready to return to their own homes. The kitchen should be a focal point of the IFC and should be used for educational purposes with mothers and staff working side by side in the provision of rehabilitative foods for the children.

Notes: A plan for the lay-out of an IFC can be found in Annex I. This plan is flexible but includes all the necessary facilities for the food storage, preparation and distribution, the supervision of feeding, sanitation and water supply, medical services, a recreational area for the recovering children, and a dining area for attendants. (It is felt that parents and attendants should not dine in the presence of children on less desirable diets in the acute ward; however, children in the rehab building will be allowed in the dining area.)

Intensive feeding should be carried out in a residential centre since night feeds are an essential part of the treatment. Where for security or other reasons patients and/or staff cannot stay overnight in an IFC, this should be called Treatment Feeding Centre to prevent confusion. These notes will discuss procedures for IFC but they also apply to treatment feeding unless mentioned otherwise. A suitable treatment feeding schedule is outlined in Annex III.

#### 6. Admission to Intensive Feeding Centres

Admissions are generally selected on clinical rather than anthropometric grounds. In practice, admissions are usually less than 70% of standard weight for height or have oedema. Others may be less malnourished but have some serious underlying illness which puts them at particular risk.

It is important that the medical personnel responsible for hospital admissions appreciate the role of the IFC, e.e. they should not send a severely malnourished child into the paediatric ward for the treatment of an infection. Most infections can be cured in a few days but PEM may take several weeks.

Almost all admissions to an IFC have some underlying illness. For this reason close medical supervision is essential, preferably from a competent Paediatrician.

Every child admitted to the IFC should be accompanied by an attendant, preferably the mother. Where there is no suitable relative available, a Khmer volunteer should be designated to attend the child. Generally only one family member should be admitted but obviously where the mother has other small children, especially if breast fed, these may also need to be accommodated in the IFC.

## 7. Feeding Schedules

In order to achieve maximum weight gain in as short a period as possible a strict feeding schedule is essential. Ideally, this is a 3 hourly schedule giving at least 6 feeds during the 24 hour period. The feeding of sick children demands great patience.

High Energy Foods are given which have the necessary amount of protein for rapid growth. The basis of the feeding is a High Energy Milk Formula (HEM) or K MIX II. Both these foods provide approximately 1 Kcal/ml after dilution. (Recipes and preparation instructions are provided in Annex IIa) Individual food requirements are calculated according to the formula 150 Kcal/Kg body weight/day. (See table Annex VI). After appetite is stimulated (usually after 3-5 days) semi-solid then solid meals can be introduced into the meals schedule. Emphasis is placed on the individuality of each case, and diets will vary, (e.g. semi-solid or solid foods may be initiated on day one according to appetite and tolerance); however, schedules are to remain strict. (Annex IIb provides additional recipes and preparation instructions.)

### Intensive Feeding (residential)

- a) HEM (or K MIX) 3 hourly for 3-5 days, 6 a.m., 9 a.m., 12:00, 3 p.m., 6 p.m., 9 p.m. (12 midnight only in the most severe cases) 1/2 strength feeds should be given for the initiation of treatment. Poor appetite will normally restrict the volume of food taken for at least 48 hours. DO NOT FORCE FULL FEEDS for at least 48 hours i.e. if giving food via a Naso-gastric tube give diluted feeds.
- b) After 3-5 days: introduce a porridge meal e.g. rice, oil, milk mixture instead of the 6 p.m. HEM feed.
- c) After 1 week: introduce rice and soup meal at 6 p.m. and a porridge meal at midday. Give additional snacks e.g. biscuits and bananas with HEM feeds.
- d) Before discharge: Children should be taking three full meals/day with extra HEM twice/day. The 9 p.m. feed should be discontinued at least 5 days before discharge.



NOTE: using the plan suggested in Annex I, it would be expected that children on diets described in a. and b. would be in the "acute" ward as they progressed to diet c. they would move to the second house and to the third house by diet d. prior to discharge.

Mother and/or attendants should be involved not only in the feeding of the children but also in the preparation of the food, the washing-up and the cleaning of the centre etc. They should all play an active role in the day to day running of the centre not the passive role of the patient and attendant in a hospital ward.

#### 8. Supervision of feeds

Supervision of feeds is the most important function of ALL the staff of an IFC. All other activities should stop during feed times and all staff should turn their attention to the feeding of their patients.

Attendants should also be trained for this task and 2 or 3 particular children allocated to them for supervision.

Mothers or other attendants must be encouraged to feed their own children, however difficult this may be. Staff should encourage and supervise but should not take over this responsibility from the attendants.

It is absolutely useless to simply leave a food ration beside a mal-nourished child and his newly admitted attendant. These children and their attendants need close supervision and encouragement if adequate quantities of food are to be consumed by the patient. Feeding should be attempted even in the presence of occasional vomiting.

Where Naso-gastric tube feeding is necessary this should be carried out under medical supervision although the mothers can quickly be trained to give these feeds themselves. Tube insertion and duration of placement will vary. A tube left in place in a child limits physical activity and is far more distressing to him than the actual placement. Therefore, tubes may be removed and replaced at the next feeds.

Bottle Feeding will not be allowed in an IFC

The quantity of food taken at each meal must be noted and recorded on the feeding card. (See next section). Any milk not consumed within one hour of distribution should be discarded.

9. Records

Accurate records should be kept concerning the progress of each child admitted to IFC. Cards are provided for this purpose (specimen in Annex IV). It is important that these cards are used correctly e.g. it is necessary to know if a child had oedema on admission and when that oedema resolved.

Weight and height of each child should be recorded on admission to the IFC and % of standard marked on the card. (Weight for height tables Annex IV).

Regular weighing every 5 or 7 days is an essential part of the care of the malnourished child. Daily weighing is not necessary except for children with oedema until the oedema is resolved. This daily weighing will demonstrate a loss in weight initially, and progress is then measured from this lowest weight.

Failure to gain weight after the loss of oedema or in marasmic children may be the result of an underlying illness or inadequate food intake. It should always be investigated.

Wweighing scales should be checked for precision regularly and a consistent technique used for each weighing. (Ideally one person should do all the weighings). Salter scales are best for this purpose.

10. Staffing of the IFC

Medical supervision is necessary in the IFC where PEM is complicated by underlying disease as is the case in refugee camps. Good nursing care is needed especially during the initiation of treatment. Most of the day to day tasks of the centre can be carried out by trained staff under the supervision of local or expatriate medical personnel. The mothers and other attendants should also be included in the work of the IFC.

Suggested staff allocation:

		<u>Day</u>	<u>Night</u>
1. Medical	- Doctor	1	-
	- Nurses	3	2
2. General Kitchen	- Cook	2	-
	- Assistants	6	-
3. Milk Kitchen	- Cook	1	1
	- Assistants	2	-
4. Wards	- Attendants	10	3

One staff member should be designated as IFC administrator. This person should then be responsible for maintaining records, ordering of supplies and equipment, allocation of staff etc. (List of equipment for IFC can be found in Annex VII)

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#### 11. Education

This is one of the most important functions of the IFC. Staff and mothers should constantly be reminded that FOOD IS THE BEST MEDICINE for the malnourished child. For this reason mealtimes should be the most important activities of the day and medical activities should be "discrete".

Staff and mothers should be encouraged to take part in all activities especially in the preparation of the meals. Cooking times should be used as classes with discussions going on about the value of the various ingredients, the methods of cooking, etc.

Mothers and attendants can be encouraged to take an interest in the weighing of the children and the significance of weight gain and loss.

Informal classes can be held at quieter times of day when child care, hygiene and nutrition can be discussed preferably using local health workers.

#### 12. Medical Care

No drugs should be given unless they are absolutely essential. Observation has shown that staff may waste considerable time in giving inessential and expensive medicines instead of supervising intensive feeding.

On admission each child should receive:

- a) Full dose (200,000 iu) vitamin A
- b) Curative dose of anti-malarial medication\*
- c) Measles vaccine\* (a measles outbreak in a feeding centre can be disastrous. The immunization of patients with severe PEM against measles is a priority as soon as their condition has started to improve.)

\*Note: These should be administered under the guidance of the medical co-ordinator/epidemiologist.

Routinely:

- a) Iron preparation daily

After 1 week:

- a) Anti-helminthic (esp. Hookworm)

Broad spectrum antibiotics should be avoided if at all possible. They are particularly dangerous if a child has a monilial infection common in PEM. Treatment by antibiotics must be limited to treatment of identified infections. Infection is often masked in malnourished children, and hypothermia rather than fever may be present. Penicillin is the antibiotic of choice in PEM.

Potassium rich foods should be given (especially bananas) particularly in the case of diarrhoea (which is frequent during the first days), or Potassium chloride should be added to the HEM or K MIX II. A bulk solution can be prepared with 7.5g in 100 ml of water; 5ml/kg of body weight are given daily in divided doses.

Complications

Death occurs in 10-20% of cases and usually takes place within the first 4 days. Infection and dehydration are the major causes.

Other possible complications are:

- a) Failure to gain weight

Sometimes children fail to respond to treatment and do not gain weight satisfactorily. Here there are two possibilities

- (i) There is some problem with the actual feeds (generally they are not prepared properly or else they are inadequate in quantity or frequency)
- (ii) There is a medical problem (e.g. an infection, worm infestation, tuberculosis, etc.) Medical examination and or nasogastric feeding are indicated if there is no oedema loss or weight satisfactorily despite a good dietary intake should be suspected of and treated for tuberculosis.

b) Hypothermia

Malnourished children, particularly marasmic ones, tend to have a low body temperature, especially at night. Care should be taken to ensure that the children are warm at night, even though the air temperature may seem uncomfortably high to the staff. Mothers should be encouraged to hold their children close to their bodies at night.

c) Severe anaemia

Anaemia is often severe and can deteriorate even after treatment for PEM has been given for 1 or 2 weeks. In severe cases, blood transfusion is recommended. Routine administration of iron with folic acid is recommended for the duration of the stay in the centre to prevent acute deterioration.

d) Lactose intolerance

Profuse diarrhoea can in some regions, be attributed to a lower tolerance to cow's milk sugar (lactose). Most diarrhoeas, however, are caused not by lactose intolerance but by infection.

If lactose intolerance is suspected, confirmation should be obtained by withholding milk from the feeds. Should the condition be present, diarrhoea will stop within 12 hours and start again after milk is reintroduced.

If lactose intolerance is confirmed, a low-lactose diet can be given (K MIX II, nonmilk diets). If lactose intolerance is not confirmed, there is no contraindication to giving the mild based diet as recommended, or two-hourly feedings of 20ml/kg of half-strength milk based diet for a few days.

e) Hypoglycaemia (low blood glucose)

This is less common when feedings are given at regular intervals during the night. Oral (or, if necessary, intravenous) administration of a strong sugar (glucose, dextrose, or sucrose) solution will be effective almost immediately. This must be followed by frequent oral feeds of sugar, or relapse may occur.

f) Relapses

Relapses after discharge from the feeding centre are very frequent (up to 75% of cases) unless the mother is admitted with the child and has taken over the feeding of the child herself. Failure to educate the mother can make intensive feeding meaningless.

13. Hygiene

Children suffering from PEM are very vulnerable to all infections.

- Safe boiled water should be available in large quantities (at least 20 litres per person). Clean cooking utensils, measures, and containers with warm antiseptic (chlorine) or detergent solution should also be available
- Do not reconstitute feeds in advance. Protect them from flies, insects, and dust
- Mothers should clean the child's feeding plate and utensils every day
- Hand-washing with soap is essential before feeding the child.
- Latrine facilities should be provided for patients and staff. But no latrine should be installed without consultation with the UNHCR camp construction officer.

14. Criteria for discharge

Oedema loss (Kwashiordor) as a sign of recovery is usually after 5-10 days. Oedema loss is accompanied by a loss of weight due to elimination of water.

Children with PEM (Kwashiordor patients after the Oedema loss) should show a weight gain of 8-10g per kg per day. (The standard weight gain for a normal 1-year-old child is 1g per kg per day)

Progress must be assessed daily if possible or at least every 2-3 days. Mothers should be given a careful explanation of the meaning of the chart which includes weight measurements.

It is essential to stimulate the malnourished child as quickly as possible since they are always lethargic and inactive. As soon as the child is sufficiently recovered he should be encouraged to move around and should be given every opportunity to participate in play or other activities at the centre.

Once the children become noisy and energetic then the IFC can be seen to have done its job successfully.

A child should not be discharged from the IFC unless:

- a) free from obvious illness
- b) alert and active
- c) has a good appetite
- d) gaining weight
- e) at least 80% of standard weight for height (with no oedema)

15. Follow-up of children discharged from IFC

All children discharged from an IFC are vulnerable to deterioration. Every attempt should be made to safeguard the children from a sudden reduction in calorie intake. For this reason all children released from the IFC MUST be referred to their nearest SFP with a referral card. It is important that the staff of the SFP are aware of the need for follow-up for these children. Regular weighing must be carried out and any deterioration reported at once to the IFC. The mothers should be advised to report any illness or change in the child's condition.

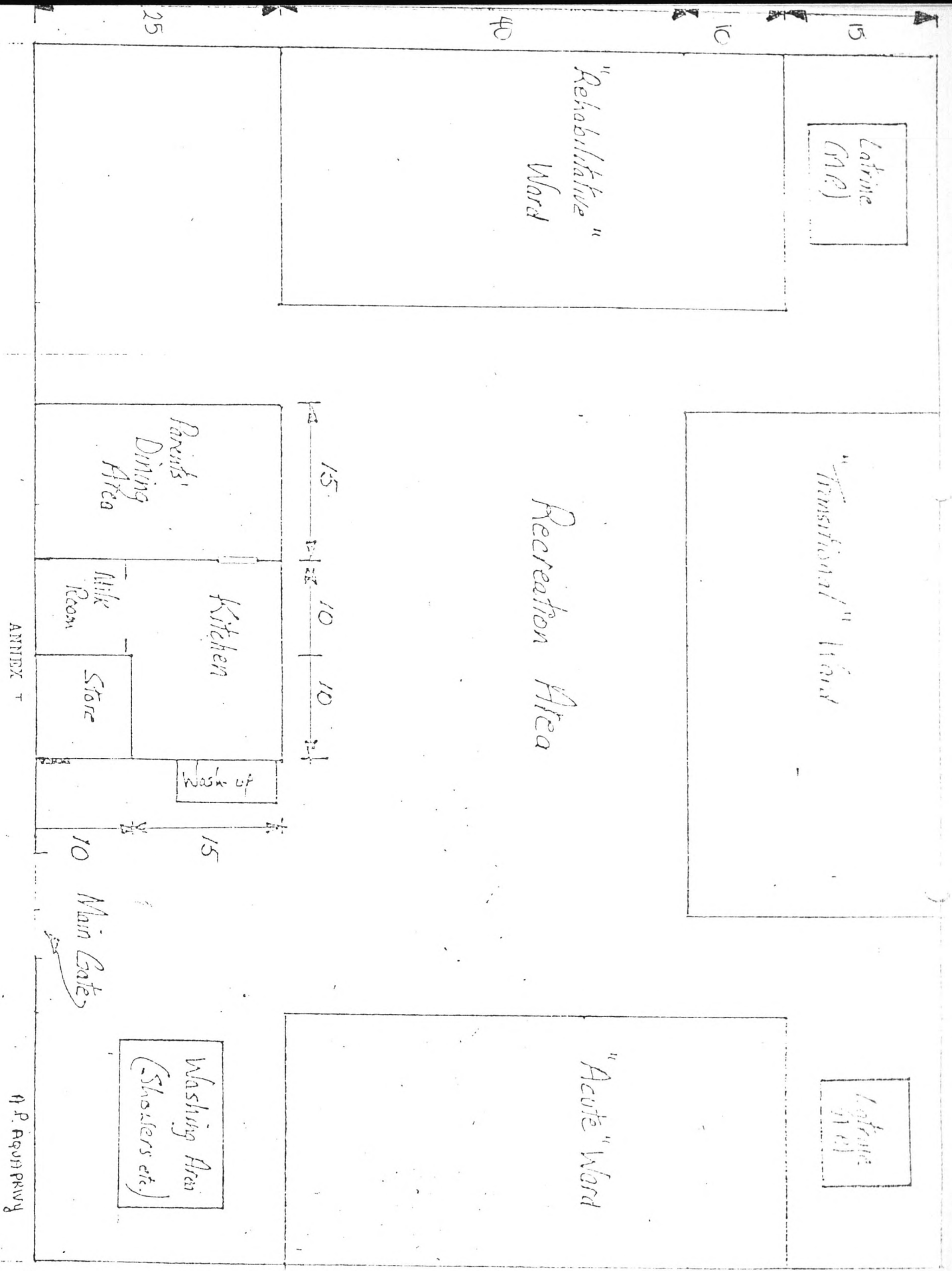
Note: Advice on the management of the IFC or individual patients will be available from the ICRC nutritionists, or UNHCR nutrition officer.



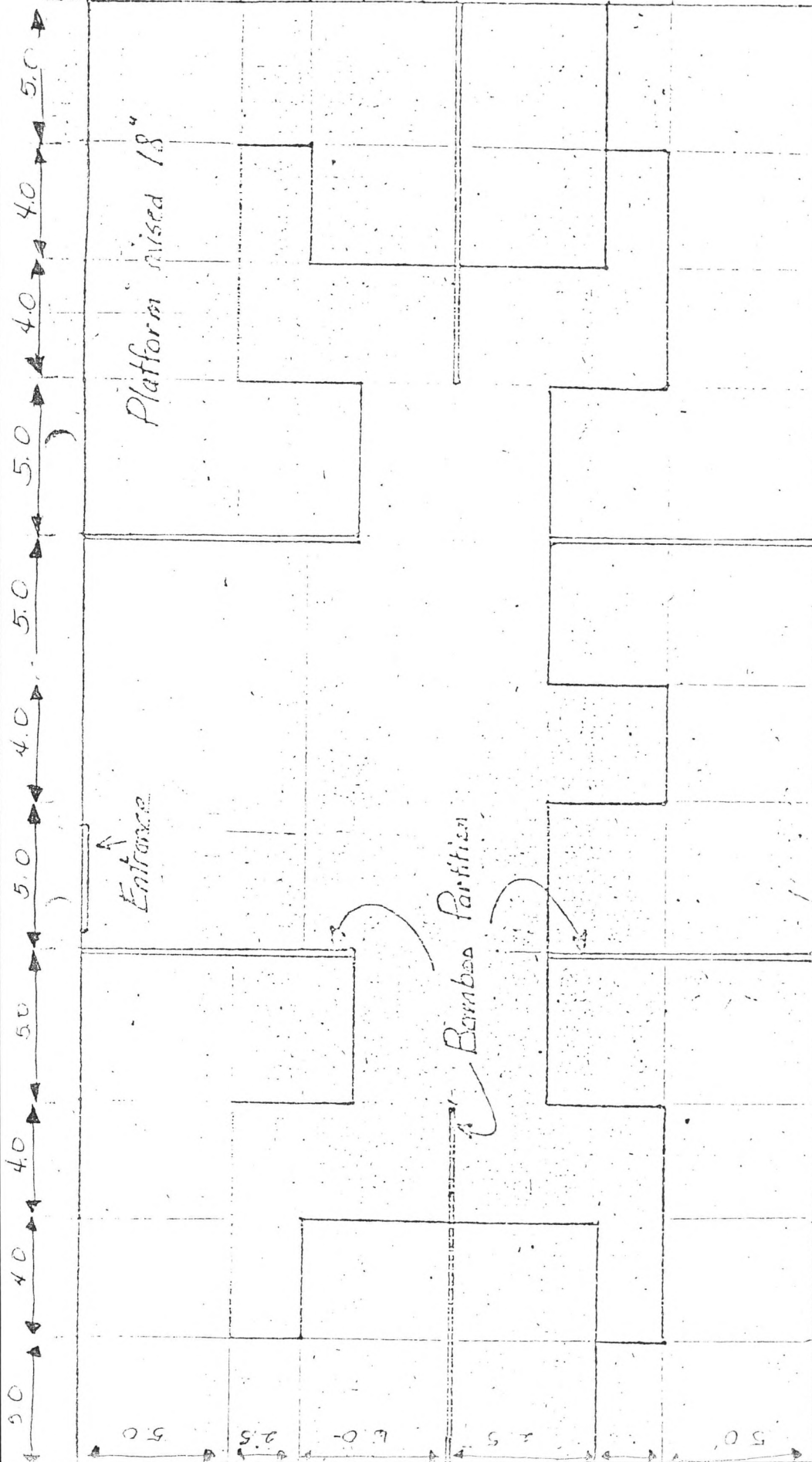
16. Staffing and supervision of IFP personnel

- a) A plan for the staffing of the IFP must be developed by the agency. This must be approved by the UNHCR nutrition officer.
- b) Each agency operating an IFC shall designate an administrator for the IFC.
- c) A schedule for increasing the involvement of responsibility of local staff in the IFP will be developed by the agency and approved by the UNHCR/ICRC.
- d) The training and supervision of volunteers and local staff is the responsibility of the agency working in the IFP.
- e) A translator should be assigned to each centre to allow communication with expatriate personnel.
- f) A designated representative of the agency involved in the IFP must be present during all activities related to intensive feeding.

ANNEX	I	Plan for IFC
	IIA	Recipes and food preparation instructions
	IIB	Additional recipes, food preparation and instructions as submitted by Dr. S.N. Chaudhuri, C.R.
	III	Treatment feeding centres
	IV	Specimen Card
	V	Weight for Height tables
	VI	Energy/Volume requirements by Weight
	VII	Equipment list for IFC



Suggested Layout of Residential Feeding Centre (20 x 8)



Dimensions in feet

This bay used as nursing station in "Acute" Feeding Ward

FEEDING WARD (50ft x 25ft)

by: S. Peal & M. Shiel  
12/1/50

ANNEX I

## ANNEX II

1. High Energy Milk Formula

## a) High Energy Milk

Premix:	Dried skim milk	6 parts by volume
	Vegetable oil	2 " " "
	Sugar	1 S " "

The ingredients for the premix are mixed together thoroughly. If kept in a sealed container, the premix can safely be stored for several days.

The premix is reconstituted using:

Premix 1 part: water 4 parts

The liquid milk should be served hot as the oil separates out.

NOTE: Were possible:

Potassium Chloride 52 g )	Should be added to each kg of premix
Magnesium Hydroxide 26 g )	

## b) KMIX II

This is a low lactose formula. The bulk of the protein content coming from casein.

KMIX II is reconstituted as follows:

KMIX	100 g
Oil	60 g
Water	1 litre

Because food scales are not always available the following conversions to Volume may be helpful:

Preparing KMIX II

(using a cup with a 250 ml. capacity)

Allowing for an average intake of 250 ml/child:

<u>Approx No. of Children</u>	<u>Volume KMIX II</u>	<u>Volume Oil</u>	<u>Volume Water</u>	<u>Final Volume</u>
1	25g(wt)	15g(wt)	fill up cup	1 cup (250 ml)
1-5	100g(wt)	60g(wt)	2 1/2 cups	1 litre
10	1 1/4 cups	1/2 cup	6 1/4 cups (1 1/2 litres)	2 litres
20	3 1/2 cups	1 1/4 cups	15 1/4 cups (4 litres)	5 litres
30	5 cups	2 cups	23 cups (5 1/4 litres)	7 litres
40	7 cups	2 1/2 cups	30 1/2 cups (7 1/2 litres)	10 litres
50	8 1/2 cups	3 1/4 cups	38 1/4 cups (1 1/2 litres)	12.5 litres
100	17 cups	6 1/2 cups	76 1/2 cups (19 litres)	25 litres
200	34 cups	13 cups	153 cups (38 1/4 litres)	50 litres

## 2. Meals for recovering patients:

Each of the following recipes provides approximately 400 KCal and 15g protein. The quantity eaten will depend on the age and condition of the child.

a) Rice	50 g	b) Rice or Noodles	50 g
Oil	10 g	Oil	10 g
Fish/meat	50 g	Beans	30 g
Vegetables	50 g	Vegetables	50 g
Cereal flour	20 g	Egg	1
c) Mung beans	50 g	d) Rice	50 g
Sweetened condensed milk	25 g	Sweetened condensed milk	20 g
Dried skim milk	20 g	Dried skim milk	20 g
Cereal flour	20 g	Oil	10 g

Cereal flours can be provided locally as there are the blended varieties e.g. Instant Corn Soy Milk ICSM

Corn Soy Milk	CSM
Wheat Soy Milk	WSB
Kaset etc.	

## 3. Porridge Mixtures

These can be from local or imported cereal blends

e.g.	<u>100 g</u>		<u>10 g</u>		<u>10 g</u>
	ICSM				
	CSM	+	Oil	+	Sugar + fruit
	WSB				
	Kaset				

## ANNEX II B

Recipes, preparations and instructions currently in operation in the Intensive Feeding Ward, Khao I Dang, submitted by Dr. S.N. Chaudhuri, C.R.S.

Feeding ScheduleFOR CHILDREN LESS THAN 6 MO. OR EQUIVALENT

- 6:00 am (or when awake)  
Breast  
Supplement with Lactogen 60 to 120 cc  
Kaset (sweetened with brown sugar if desired) (if over 4 mo 1-2 spoons full)
- 9:00 am Breast  
Supplement with Lactogen 60 to 120 cc  
Orange juice (teach mother to squeeze juice into baby's mouth from orange section. Remove pits)
- 11:00 am Breast  
Supplement with Lactogen 60 to 120 cc  
Kaset (sweetened with brown sugar if desired) (if over 4 mo)  
1-2 spoons full
- 2:00 pm Breast  
Supplement with Lactogen 60 to 120 cc
- 3:30 pm electrolyte 100 cc
- 5:00 pm Breast  
Supplement with Lactogen 60 to 120 cc  
Laset (sweetened with brown sugar if desired) (if over 4 mo)  
1-2 spoons full
- 8:00 pm Breast  
Supplement with Lactogen 60-120 cc
- 12:00 pm Breast  
Supplement with Lactogen - severe malnourished (or if awake)



ADDITIONAL TIPS FOR FEEDING BABIES

1. If baby can't suck   A. Teach her to do it  
                          B. Express mother's milk and give to baby
2. If baby doesn't tolerate Lactogen try:  
                          A. Dumilk  
                          B. Dilute Lactogen
3. If baby has continued diarrhoea try:  
                          A. egg yolk  
                          B. banana
4. Bottles with nipples are TABOO except in exceptional cases because of sterilization (lack of) and other unsanitary conditions in camp.
5. For weaning, use eye dropper or syringe or small end of spoon.
6. Kaset is a transition food to fill infant and prepare it for rice and other foods. Give when child is not satisfied with milk, but not ready to eat rice. Little food value. Given to infants over 4 mo and under 6 mo.

## ANNEX II B

FEEDING SCHEDULE  
CHILDREN LESS THAN 6 MO

2400	If awake Lactogen 120 cc
0600	Lactogen 120 cc Kaset for those over 4 mo
0900	Lactogen 120 cc fruit juice
1100	Lactogen 120 cc Kaset for those over 4 mo
1315	Lactogen 120 cc
1500	Electrolyte 120 cc
1700	Lactogen 120 cc Kaset for those over 4 mo
2000	Lactogen 120 cc biscuits for all

## ANNEX II B

FEEDING SCHEDULE  
ADULTS AND CHILDREN OLDER THAN 6 MO.

2400 Milk 150 cc for specials and those who awaken

0600 Milk 150 cc  
Biscuits/rice  
Fruit/egg

0900 Special and generalized feeding:  
Milk 150 cc  
nursing mothers receive 200 cc  
Milk  
Fruit

1000 Electrolytes for special feeding:  
100 cc

1100 Rice  
Vegetables, Fish and/or  
Meat soup

1330 Electrolytes for all patients:  
and all nursing mothers  
100 cc

1500 Special and generalized feeding:  
Milk 150 cc  
Milk for nursing mothers 200 cc  
Fruit - Biscuit

1700 Rice  
Vegetable, Fish and/or  
Meat soup

2000 Milk & Biscuits  
150 cc

## ANNE II B

DIET SHEET FOR CHILDREN  
INTENSIVE FEEDING WARD

FOOD	AMOUNT	DESCRIPTION	APPROX. CAL.	(nett)	APPROX. PROTEIN
6-7 am	Milk 150 mls Rice 50 gms Egg/Fish 30 gms Fruit 1 piece	KMIX II + OIL Weighed raw 1 Boiled orange/banana/etc.	170 180 150 -	8 3 20 -	6 (utilisable) 2 15 -
9 am	Milk 150 mls	KMIX II + Oil	170	8	6
11 am	Rice 100 gms Soup - veg. fish/meat 200 mls	Weighed raw	360 100	5 10	3 7
3 pm	Milk 150 mls Fruit 1 piece Biscuits 50 gms	K MIX II + Oil orange/banana/etc Gateau milk protein	170 - 130	8 - 10	7 - 7
5 pm	Rice 100 gms Soup - veg. fish/meat 200 mls	Weighed raw	360 100	5 10	3 7
8 pm	Milk 150 mls Biscuits 50 gms	KMIX II + Oil Gateau milk protein	170 130 <u>2,190</u>	8 10 <u>105</u>	6 7 <u>75</u>

Snacks in the form of fried food, biscuits, cakes are given once a day in addition to the above foods.

Average daily Calorie Requirement for children below 5 yrs is approximately 1,500 cal.  
Above 5 yrs approximately 2,000 cal.

## ANNEX II B

## MIXING INSTRUCTIONS

Regular Milk1. Red Cow

1 can of red cow milk powder  
cold water to make a paste  
2 cans sweetened condensed milk  
Add enough warm water to make 1 full bucket of milk

2. K-MIX

2 cups vegetable oil  
6 cups K-MIX  
Make a paste, then add 4 large dippers of water

3. Lactogen for babies under 6 mo or equivalent

2 cups Lactogen  
5 cups water (warm)

4. Dumilk for intolerance of Lactose

1 cup Dumilk  
4 cups water (warm)

5. Soy Bean Milk for intolerance of other milks

Is kept in a locked cupboard  
Bottles to be saved (2 per bottle)

6. Kaset

1 cup Kaset  
3 cups water (warm)

7. Electrolyte Mixture

2 large (or 8 small) packets  
1 large dipper of water

N.B. All water must be boiled!  
A cup means a full cup!

ANNEX II B  
WARD POLICY &  
TIPS FOR VOLUNTEERS

1. Feeding

- a) We try to teach the mother to feed and to care for her child. To bathe her and to keep her bed and space clean.

Help and teach the parent all you can-- But do things for her ONLY WHEN SHE CANNOT DO THEM FOR HERSELF!

- b) Getting the milk into the child is of Greatest Importance! Help them, bribe them, force them. You could ask the nurse to put it in a tube. Be patient, but do get the milk into them.
- c) For children who vomit or can't tolerate milk, we suggest:
- Change to Dumilk
  - Decrease the amount - may begin with 30 cc every 1/2 hour or even less and gradually build up tolerance. (Stomach may not be able to absorb milk because of long absence of enzymes etc.)
  - Dilute the milk
  - For vomiting give Plasil - 1 tsp 15 min. before feeding
  - Mix milk with melted biscuit - make a pudding
  - Insert N.J. tube (by nurse only) if child is too weak or resists too much
- d) Do not give food or goodies to patients without checking with the nurse in charge of feeding

## ANNEX III

## TREATMENT FEEDING CENTRES IN REFUGEE CAMPS

Good results can be achieved from these centres if children attend regularly from early morning to late afternoon. It is necessary to have well trained, reliable local staff for the times when medical personnel cannot be present to supervise feeds.

It is usually necessary in these centres to introduce mixed foods earlier than in the residential centres since mothers and children will not return daily unless they are tempted by "good meals". This should be considered a compromise but a necessary one.

Suggested schedule:

7 am	9 am	11 am	1 pm	3 pm	5 pm
HEM	HEM	Rice	HEM	HEM	Rice
+	+	+	+	+	+
Porridge	Banana	Soup	Biscuit	Hard boiled egg	Soup

A dry ration allocation of porridge mixture should be given to take home.

(See recipes in Annex II)

A weather proof building with kitchen is required for such a centre. These may usefully be attached to a SFP.

The full co-operation of the mother or attendant is essential if rapid weight gain is to be achieved among these malnourished children.

Home visits and good follow-up are needed to ensure attendance.

FEEDING WARD NO. SA KEOW I. - B

REG NO: 049 NAME: KIM CHANG

SEX: F AGE: 4 YR

ACCOMPANIED BY: MOTHER + INFANT

DATE OF ADMISSION: 14/11/79

DIAGNOSIS: PARASMIC KWASHIORKOR WITH PNEUMONIA

WEIGHT: 10 Kg

HEIGHT: 98cm

WT/HT: < 70%

OEDEMA: +

A/C: 11 S

(area unclear)

VOLUME FEEDS: 300ml 3hrly

~~FULL~~ HALF STRENGTH:

DATE	FEEDS TAKEN							OBSERVATIONS
	6AM	9AM	12M	3PM	6PM	9PM	12MN	
14/79	-	-	100ml	100ml	150ml	100ml	50ml	Letargic, anorexic. On antibiotics - See Treatment Card. W.A. on admission
15/79	150ml	200ml	200ml	150ml	150ml	200ml	100ml	Still febrile and anorexic. Diarrhoea.
16/79	100ml	200ml	200ml	200ml	200ml	200ml	200ml	Tuba feeding during day. Some improvement
17/79	200ml	200ml	200ml	100ml	200ml	200ml	100ml	Remains difficult to feed. Diarrhoea continues
18/79	300ml	300ml	300ml	250ml	300ml	300ml	100ml	Eating well. More active. Diarrhoea improved
19/79	300ml	300ml	300ml	300ml	300ml	300ml	-	Continues to improve. Oedema gone.
20/79	300ml	300ml	300ml	300ml	300ml	300ml	-	Finished antibiotics. WT. 10.8 Kg.
21/79								
22/79								
23/79								
24/79	300	300	300	300	300	300	-	WT. 11.2 Kg.



Weight-for-height

YOUNG CHILDREN (BOTH SEXES)

Age (yr)	Weight (kg)				
	Standard	90% standard	80% standard	70% standard	60% standard
2.0	14	17	22	28	30
2.1	15	18	23	29	31
2.2	16	19	24	30	32
2.3	17	20	25	31	33
2.4	18	21	26	32	34
2.5	19	22	27	33	35
2.6	20	23	28	34	36
2.7	21	24	29	35	37
2.8	22	25	30	36	38
2.9	23	26	31	37	39
3.0	24	27	32	38	40
3.1	25	28	33	39	41
3.2	26	29	34	40	42
3.3	27	30	35	41	43
3.4	28	31	36	42	44
3.5	29	32	37	43	45
3.6	30	33	38	44	46
3.7	31	34	39	45	47
3.8	32	35	40	46	48
3.9	33	36	41	47	49
4.0	34	37	42	48	50
4.1	35	38	43	49	51
4.2	36	39	44	50	52
4.3	37	40	45	51	53
4.4	38	41	46	52	54
4.5	39	42	47	53	55
4.6	40	43	48	54	56
4.7	41	44	49	55	57
4.8	42	45	50	56	58
4.9	43	46	51	57	59
5.0	44	47	52	58	60
5.1	45	48	53	59	61
5.2	46	49	54	60	62
5.3	47	50	55	61	63
5.4	48	51	56	62	64
5.5	49	52	57	63	65
5.6	50	53	58	64	66
5.7	51	54	59	65	67
5.8	52	55	60	66	68
5.9	53	56	61	67	69
6.0	54	57	62	68	70
6.1	55	58	63	69	71
6.2	56	59	64	70	72
6.3	57	60	65	71	73
6.4	58	61	66	72	74
6.5	59	62	67	73	75
6.6	60	63	68	74	76
6.7	61	64	69	75	77
6.8	62	65	70	76	78
6.9	63	66	71	77	79
7.0	64	67	72	78	80
7.1	65	68	73	79	81
7.2	66	69	74	80	82
7.3	67	70	75	81	83
7.4	68	71	76	82	84
7.5	69	72	77	83	85
7.6	70	73	78	84	86
7.7	71	74	79	85	87
7.8	72	75	80	86	88
7.9	73	76	81	87	89
8.0	74	77	82	88	90
8.1	75	78	83	89	91
8.2	76	79	84	90	92
8.3	77	80	85	91	93
8.4	78	81	86	92	94
8.5	79	82	87	93	95
8.6	80	83	88	94	96
8.7	81	84	89	95	97
8.8	82	85	90	96	98
8.9	83	86	91	97	99
9.0	84	87	92	98	100
9.1	85	88	93	99	101
9.2	86	89	94	100	102
9.3	87	90	95	101	103
9.4	88	91	96	102	104
9.5	89	92	97	103	105
9.6	90	93	98	104	106
9.7	91	94	99	105	107
9.8	92	95	100	106	108
9.9	93	96	101	107	109
10.0	94	97	102	108	110

## ANNEX VI

Volume of HEM at each meal depends on weight of the child. Before other meals are introduced this can be based on the following table:

Food volumes required (if food provides 1KCAL/ml)

(3 hourly feeds) e.g. KMIX II on HEM

Weight of Child	Vol/Energy requirement	Vol required at each feed 4 feeds/day	Vol required at each feed 5 feeds/day	Vol required at each feed 6 feeds/day
up to 5 kg.	750 Kcal/ml	200 ml	150 ml	150 ml
5.0-7.5 kg	1125 Kcal/ml	300 ml	250 ml	200 ml
7.5-10 kg	1500 Kcal/ml	400 ml	300 ml	250 ml
10.0-12.5kg	1870 Kcal/ml	500 ml	400 ml	300 ml
12.5 kg	2000 Kcal+	500 ml+	500 ml+	500 ml+

## ANNEX VII

Equipment and materials required for an intensive feeding centre  
(100 in-patients).

Bed/platform/mats	100
Blankets	200
Tables	4
Chairs	10
Weighing Scales (Salter)	3 (one per house)
Height Stick	3 (one per house)
Tape Measures	3
Registers	3
Cards (IF cards)	500
(Treatment cards)	500
Card Clips	200
String	1 Roll
Cups (250 ml)	200
Plates	200
Spoons	200
Food Scales	1
Measuring Jugs	2
Buckets - large	10
- small	10
Water Containers	3 (one per house)
Whisks	5
Stoves (charcoal)	10
Scrubbing Brushes	10

C. ORGANISATION

The organisation for the management of the intensive feeding programme is as follows:

1. UNHCR NUTRITION OFFICER

The nutrition officer shall be a nutritionist, dietician or medical person trained or experienced in the operation of relief feeding programmes. This person will be a member of the UNHCR operations staff, not a representative of one of the voluntary organisations.

The nutrition officer shall be the final authority for all questions regarding suitability of foods, diets, recipes, organisation of feeding programmes, facilities and personnel in the IFPS.

The nutrition officer shall be responsible for overall assessment of the nutritional status and needs of the camps. He shall set up and implement the regular surveillance systems and shall conduct periodic briefings on his findings to the volags conducting the individual feeding programmes.

2. CAMP MEDICAL COORDINATOR: (IFP involvement)

In each camp, a medical coordinator will be designated by UNHCR or ICRC and will be a part of the camp administrative structure. The medical coordinator in each camp will be responsible for seeing that all IFP's meet the UNHCR standards. To do this, he will carry out periodic inspections of the IFC's, their records, and their surveillance statistics. The medical coordinator will advise the nutrition officer of any problems in logistics, personnel or non-compliance by agencies with the standards in the IFP.

3. NUTRITION ADVISORY COMMITTEE (NAC)

A NAC shall be established to advise the UNHCR nutrition officer on matters relating to the conduct of the feeding programmes. The committee shall be made up of representatives of the agencies involved in feeding within the camps. The convenor shall be a representative of UNICEF.

The NAC shall establish a subcommittee made up of representatives of the agencies involved in intensive feeding within the camps.

4. NUTRITION ADVISORY COMMITTEE - INTENSIVE FEEDING SUBCOMMITTEE

A representative from each agency conducting intensive feeding services in the camps will be delegated by the agency involved to serve on the NAC Intensive Feeding subcommittee. The subcommittee members will report to the NAC regarding status of IFCS and to exchange information between the individual intensive feeding centres.

5. ADMINISTRATION OF CAMP IFC

One staff member of each IFC will be delegated as IFC administrator by the agency involved. He will be responsible for maintaining records, ordering of supplies and equipment, allocation of staff, preparation and distribution of food within the IFC, hygiene in the IFC, and overall function of the IFC to meet the standards. He will report periodically to the medical coordinator any problems in logistics or personnel.

6. LEAD AGENCIES

The UNHCR shall designate a lead agency from among the camps to serve as the "model" agency for the delivery of intensive feeding services. All agencies in the camps offering intensive feeding shall duplicate the services, schedules, and routines of the lead agency.

D. ROUTINE1. FEEDING SCHEDULES

Each IFP shall conduct feeding schedules as set in the guidelines with the advice of the UNHCR Nutrition Officer and the Camp Medical Coordinator. Strict adherence to feeding times and routine cooking, cleaning and teaching schedules is emphasized.

2. SURVEILLANCE

Each IFP shall conduct the surveillance activities listed in the guidelines on a monthly basis. A monthly report shall be compiled and forwarded to the camp medical coordinator who will verify the reports if necessary. The medical coordinator will prepare a summary for the entire camp on the IFP Periodic Form and present it to the nutrition officer. This shall be recorded in the Policy and Standards Implementation Book.

E. JOB SPECIFICATIONS1. Title of Position: UNHCR Nutrition Officer

a. Supervisor: Chief of B.O.

b. Subordinates: ICRC Medical Coordinator in each camp

c. Duties:

To ensure that all agencies in the camp meet the UNHCR feeding and nutrition standards in the basic rations, supplemental feeding and school feeding. To ensure that the supplies necessary to maintain the standards are procured on a timely basis by preparing estimates of food needs present and potential for the procurement officer. To provide the training necessary to ensure that the medical coordinator and all agencies operating nutrition programmes are able to meet the standards.

d. Responsibilities:

To monitor the nutrition status in each camp and to prepare a monthly summary of the nutritional status on the UNHCR Periodic Report Form. To periodically report on the quality of the foods being delivered in each of the feeding programmes. To coordinate between IFPs and SFPs as required.

3. Coordinate with:

ICRC medical coordinator in each camp, UNHCR medical coordinator, voluntary agencies in each camp involved with IFPs.

f. Maintain communications with:

Nutrition Advisory Committee and intensive feeding subcommittee of the NAC.

- g. Maintain communications by:  
Attendance at all NAC meetings.

2. Title of Position: Medical Coordinator

- a. Supervisor: Camp Administrator
- b. Subordinates: Participating agencies in the UNHCR IFPs
- c. Duties:

To ensure that all agencies in the camps IFPs meet the UNHCR feeding and nutrition standards by checking volags periodically every two weeks. To advise on problems relating to feeding and nutrition of IFPs in the camp. To advise on any IFP supply problems or potential that may occur.

- d. Responsibilities:

To monitor the nutrition improvement and status of IFPs in the camp. To check the surveillance and record keeping of the participating agencies in the IFPs of the camp. To check the preparation of goods at each IFPs in all phases of feeding. To check the hygiene at each IFP. To determine present and potential needs of the IFPs of the camp and reporting this to the camp logistic coordinator. To ensure that adequate training is given to all Khmer staff. To ensure that feeding operations in the IFPs are carried out in a regular, daily routine.

- e. Coordinate with:

Volags, WFP, UNHCR Nutrition Officer, UNHCR Medical Officer.

- f. Maintain communications with:

UNHCR Nutrition Officer, UNHCR Medical Officer, WHO, ICRC, IFPs in other camps.



g. Maintain communications by:

Periodic reports, 1 monthly visit for medical coordination meeting.

ANNOTATED BIBLIOGRAPHY TO ACCOMPANY WORKBOOK

1. de Ville de Goyet, C., Seaman, J. and Geijer, U. The Management of Nutritional Emergencies in Large Populations. WHO, Geneva: 1978.

This useful publication lays the basis for the execution of feeding programmes in disaster situations, applicable both in natural disasters and in refugee work. Briefly, issues in nutritional and communicable disease surveillance are discussed and some basic information with respect to feeding issues as part of camp administration is given.

2. PAG. A Guide to Food and Health Relief Operations for Disasters.

UN, New York: 1977.

This is a more general publication which gives brief individual treatment to a wide range of issues in relief operations. In addition to Chapters dealing with feeding programmes, medical care, water supply and environmental sanitation and nutritional surveillance, there are chapters dealing both with disaster preparedness and prevention and post-disaster rehabilitation and development. The only disadvantage of this publication is that in its broad scope of subject matter there is very little specific detail.

3. WHO. A growth chart for international use in maternal and child health care: Guidelines for primary health care personnel. WHO, Geneva; 1978.

This short publication describes the utilization of the weight-for-age growth chart in clinic situations. It covers no other aspects nor methodologies for nutritional assessment and surveillance.

4. UNHCR. UNHCR Policy and Standards Implementation Book for the Kampuchean Operation. UNHCR, Geneva; 1980.

This invaluable document describes, in a strictly organized fashion, divided up into 16 separate manuals, the set of standards which were adopted for refugee operations in Thailand. In each manual, from that covering potable water to public health education, service delivery standards, over-all organization, daily camp routines and individual workers' job descriptions are described.

RJB/ket

8.14.80