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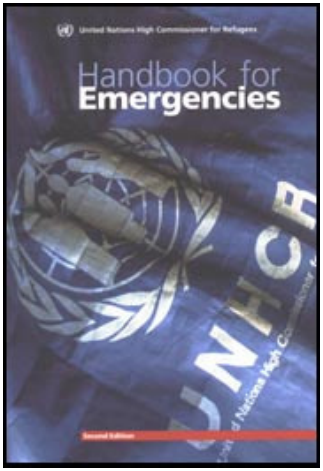
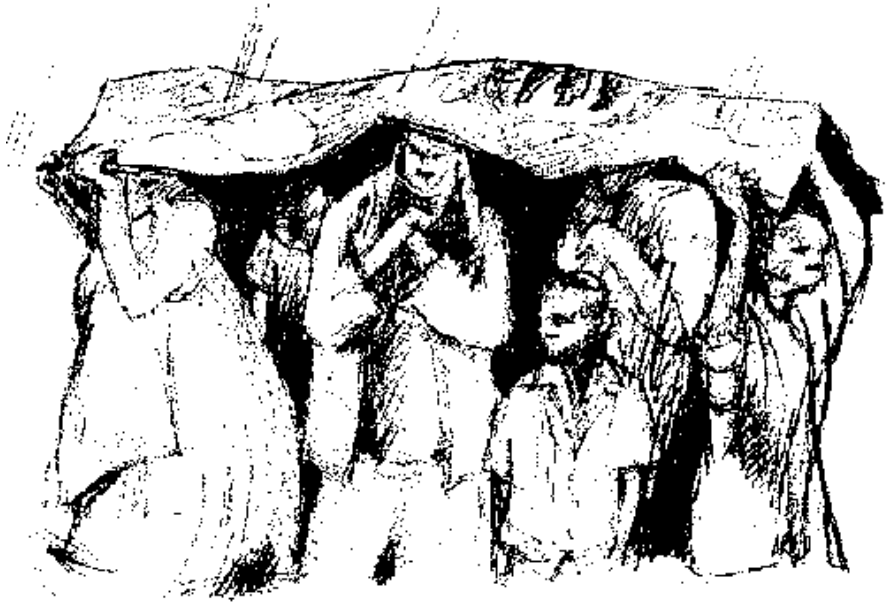


Handbook for Emergencies - Second Edition (UNHCR, 1999, 414 p.)

12. Site Selection, Planning and Shelter



Figure

Overview

Situation

Suitable and well-selected sites, soundly planned refugee settlements with adequate shelter and integrated, appropriate

infrastructure are essential in the early stages of a refugee emergency as they are lifesaving and reduce suffering. Refugee settlement in emergencies may take the form of dispersed settlements, mass accommodation in existing shelters or organized camps. Initial decisions on location and layout have repercussions throughout the existence of a refugee settlement with long-term effects on protection and the delivery of humanitarian assistance.

Objectives

To provide suitable sites and shelter to accommodate refugees in emergencies.

Principles of Response

- **Use longer term planning principles, even when the refugee situation is expected to be only temporary;**
- **Decisions on site selection and camp planning are very difficult to reverse, therefore when in doubt seek technical support;**
- **Avoid high population density in settlements and in**

shelters;

- **Avoid very large emergency settlements; refugee camps should normally be considered as a last resort;**

- **Involve refugees in all phases of settlement and shelter planning and construction;**

- **Use a bottom-up planning approach, beginning with the smallest social units, preserving traditional social arrangements and structures as far as possible;**

- **Develop a comprehensive master plan, with the settlement layout developed around sanitation and other services, providing room for expansion.**

Action

- **Assess the suitability of the refugee site and ensure that it meets the basic criteria;**

- **Simultaneously assess the most immediate needs for emergency shelter and provide the necessary materials that**

cannot be met from locally available resources;

- **Identify the most urgently required measures to improve site planning and layout, and implement these as soon as possible.**

Introduction

1. Providing a place to live is a natural consequence of granting asylum. As the layout, infrastructure and shelter of an emergency camp will have a major influence on the safety and well-being of refugees, these factors must be coordinated with the other vital sectors involved in the humanitarian response: community services, water, environmental sanitation, health, education, food distribution, logistics, forestry, and the environment.

2. Most refugee operations last much longer than initially anticipated, therefore cost-effective and sustainable infrastructure and shelter should be planned from the start. The expected life-span of a camp will influence site selection, camp planning and the implementation of a refugee operation.

3. The role and responsibility of the national authorities in site selection is obvious and of fundamental importance. Equally, the refugees themselves must be involved as early as possible; ideally, the needs of the refugees should determine the location, size and layout of the site. In practice a compromise has to be reached between the needs of refugees and external factors, both practical and political.

4. Good site selection, planning and shelter will:

i. Save lives and reduce cost;

ii. Minimize the need for difficult, corrective measures later;

iii. Make the provision of utilities, services and infrastructure easier and more cost-effective;

iv. Ensure most efficient use of land, resources and time.

5. Emergency refugee settlements generally fall into one of three categories:

i. Dispersed settlement;

ii. Mass shelter;

iii. Camps.

Dispersed Settlement

6. This type of arrangement is where the refugees find accommodation within the households of families who already live in the area of refuge. The refugees either share existing accommodation or set up temporary accommodation nearby and share water, sanitation, cooking and other services of the preexisting households.

7. Accommodation is often found with extended family members or with people of the same ethnic background. This type of arrangement may occur in both rural or urban settings. The advantages of this type of settlement are:

i. Quick to implement;

ii. Limited administrative support is needed;

iii. Low cost;

iv. Fosters self help and independence;

v. It has less impact on the local environment than camps.

8. The disadvantages of this type of settlement are:

i. The host families and communities can become overburdened and impoverished;

ii. It can be difficult to distinguish the host population from the refugees. This may pose problems where population estimation and registration are required;

iii. Protection problems may not be as easy to detect as when the population is more concentrated;

iv. Shelter and other forms of assistance are likely to be needed by the host population as well as the refugees.

Mass Shelter:

Public Buildings and Community Facilities

9. This type of settlement is where refugees find accommodation in pre-existing facilities, for example, in schools, barracks, hotels, gymnasiums. These are normally in urban areas and are often intended as temporary or transit accommodation. The advantages of this type of settlement are:

i. They are not continuously inhabited during normal use and refugees can be accommodated immediately without disrupting accommodation in the hosting area;

ii. Services such as water and sanitation are immediately available, though these may be inadequate if the numbers are large;

iii. The need to construct additional structures specifically for the refugees is avoided.

10. The disadvantages of this type of settlement are:

i. They can quickly become overcrowded;

ii. Sanitation and other services can become overburdened;

iii. Equipment and structure can be damaged;

iv. Buildings are no longer available for their original purpose, thus disrupting public services to the hosting population;

v. Lack of privacy.

Camps

11. This type of settlement is where refugees find accommodation in purpose built sites where a full range of services, for example water, sanitation, are provided, usually exclusively for the population of the site.

12. High density camps with very large populations are the worst possible option for refugee accommodation. However, this may be the only option because of decisions by the host country or simply because of a lack of alternatives. They are common in areas with little or no pre-existing infrastructure or where the size of the refugee population is such that it would put an intolerable strain on the local resources if the two other types of settlement mentioned

above were used.

13. The advantages of this type of settlement are:

i. Services can be provided to a large population in a centralized and efficient way;

ii. There may be economies of scale in the provision of some services compared with more dispersed settlements;

iii. The refugee population can be easy to identify and communicate with;

iv. Voluntary repatriation can be easier to organize.

14. The disadvantages of this type of settlement are:

i. High population density seriously increases health risks to the population;

ii. High risk of environmental damage in the immediate vicinity of the camp;

iii. High population concentrations, particularly close to international borders, may make the population vulnerable to protection problems;

iv. Large camps may provide a hiding place and support base for armed groups who should be excluded from refugee status. It may be difficult to distinguish these groups from the normal refugee population and thus they may continue to benefit from assistance.

Organization of Response

- **Site selection, planning and shelter have a major bearing on the provision of other assistance.**
- **This subject must therefore be considered as essential to a problem and needs assessment and response.**
- **Expertize is necessary, as is swift coordinated planning of a new site or the improvement of existing conditions.**

Introduction

15. Site selection, planning and provision of shelter have a direct bearing on the provision of other assistance and will be important considerations in the overall assessment of problems and needs and planning of response. Decisions must be taken as part of an integrated approach and in light of the advice of specialists and views of the refugees.

Contingency Planning

16. Ideally sites should be selected, planned and developed prior to the arrival of the refugees. However, frequently the scale, nature, timing or direction of movement of the refugee flow will mean that some or all aspects of a contingency plan may need to be modified in the face of changing or unforeseen events. The information previously gathered in the contingency planning process, however, will usually be useful.

17. Because of the nature of emergencies, and because practical and political considerations are often the primary determinant of the location of a site, the immediate priority will often be to improve sites where refugees have spontaneously settled.

Information for Site Selection and Planning

18. The information previously gathered from the contingency planning process, and information already available (maps and data) should be reviewed to assist in determining the range of options for sites. Information that is essential for planning will often be in the form of maps, reports surveys and other data and should typically cover such areas as topography, land use, climate, soils, geology, hydrology, vegetation, infrastructure and key natural and cultural resources. Sources of information may include government offices, educational institutions and UN agencies. UNHCR Headquarters, through the focal point on Geographical Information Systems (GIS) can also support operations with maps, aerial photographs, satellite images and a special geographic database.

Expertize and Personnel

19. Expertize may be required in the fields of hydrology, surveying, physical planning, engineering (e.g. water supply, environmental sanitation, road and bridge construction, building materials, etc.), public health, the environment and perhaps social anthropology. Familiarity with conditions in both the country of origin and asylum

is very important. Prior emergency experience and a flexible approach are particularly valuable.

20. Expertize and advice should be sought through UNHCR's Engineering and Environmental Services Section, who will advise on the fielding of a specialist to coordinate activities in this sector. Potential sources of the necessary expertize are government line ministries, national and international NGOs, architecture and engineering faculties, local industry and professional organizations, as well as other UN organizations.

21. Site selection and settlement planning require broad consultations with all concerned in the planning, development and use of the site. When appropriate, multi-sector planning teams, work-groups or task-forces might be formed to better structure consultations and better solicit inputs. Consensus should be sought, though it is rare that the needs of all the parties will be fully satisfied.

Criteria for Site Selection

- **Land may be scarce in the country of asylum and no site**

may be available that meets all of the desired criteria. If, however, the site is clearly unsuitable, every effort must be made to move the refugees to a better site as quickly as possible. Both the problems which result from a bad site, and the difficulties inherent in a move, increase with time.

Introduction

22. The social and cultural background of the refugees must be a primary consideration and will be an important determinant of the most appropriate type of site and shelter. In many circumstances, however, choice will be limited and land that meets even minimum standards may be scarce. For uninhabited sites or areas where refugee settlement is proposed, it is wise to establish why the site was not already in use, and examine whether the reason - for example, no water or because it floods in the monsoon - does not also exclude use by the refugees.

Water Supply

23. A specialist assessment of water availability should be a prerequisite in selecting a site.

The availability of an adequate amount of water on a year-round basis has proved in practice to be the single most important criterion, and commonly the most problematic

A site should not be selected on the assumption that water can be found merely by drilling, digging, or hauling. Drilling may not be feasible or may not provide water in adequate quantity and quality. No site should be selected where the hauling of water will be required over a long period.

Size of Camp Sites

24. While there are recommended minimum area requirements for refugee sites, these should be applied cautiously and with flexibility. They are a rule of thumb for an initial calculation rather than precise standards.

Ideally, the recommended minimum surface area is 45 m^2 per person when planning a refugee camp (including garden space). However, the actual surface area per person (excluding garden

space) should not be less than 30 m^2 per person. The figure of 30 m^2 surface area per person includes the area necessary for roads, foot paths, educational facilities, sanitation, security, firebreaks, administration, water storage, distribution, markets, relief item storage and distribution and, of course, plots for shelter. The figure of 30 m^2 does not include, however, any land for significant agricultural activities or livestock. Although agricultural activities are not usually a priority during emergencies, small vegetable gardens attached to the family plot should be included in the site plan from the outset. This requires a minimum increase of 15 m^2 per person, hence, a minimum of 45 m^2 overall land allocation per person would be needed.

25. Large camps of over 20,000 people should generally be avoided.

The size of a site for 20,000 people should be calculated as follows assuming space for vegetable gardens is included:

> ***20,000 people × 45 m^2= 900,000 m^2 = 90 ha (for example a site measuring 948 m × 948 m).***

26. If possible, there should be a substantial distance between each camp. The distance depends on a number of factors: access, proximity of the local population, water supplies, environmental considerations and land use.

27. Refugee settlements should have potential for expansion to accommodate increase in the population due to natural increases or new arrivals. The excess of births over deaths means that the population could grow as fast as 3 to 4% per year.

Land Use and Land Rights

28. In most countries land for the establishment of refugee sites is scarce. Often, sites are provided on public land by the government. Any use of private land must be based on formal legal arrangements in accordance with the laws of the country.

Note that UNHCR neither purchases nor rents land for refugee settlements.

Headquarters should be consulted at once if this is a problem.

29. Once a possible site has been identified, the process of site assessment should always include clarification of land-ownership and land rights. Almost invariably, land rights or ownership are known, even though these may not be well documented in public record, or may not be obvious. Nomadic use of range-land, for instance, requires huge areas and may not look used.

30. The refugees should have the exclusive use of the site, through agreement with national and local (including traditional) authorities. Traditional or customary land use rights are very sensitive issues, and even if there may be an agreement with the national government to use a site, local groups may disagree with the site being used even temporarily. Clarification of access rights and land use restrictions is also necessary to define the rights of the refugees to:

i. Collect fuel-wood, and timber for shelter construction as well as fodder for animals;

ii. Graze their animals;

iii. Engage in agriculture or other subsistence activities.

Security and Protection

31. In principle, the granting of asylum is not an unfriendly act by the host country towards the country of origin. However, to ensure the security and protection of the refugees, it is recommended that they be settled at a reasonable distance from international borders as well as other potentially sensitive areas such as military installations.

The OAU Convention states: "for reasons of **security, countries of asylum shall, as far as possible, settle refugees at a reasonable distance from the frontier of their country of origin"[1].**

[1]Article II, paragraph 6 OAU Convention.

Exceptions should only be made to this rule where the interests of the refugees would be better served, for example if there are good prospects for early voluntary repatriation, and security and protection considerations allow.

Topography, Drainage and Soil Conditions

32. Where water is readily available, drainage often becomes a key criterion. The whole site should be located above flood prone areas, preferably on gentle (2 to 4%) slopes. Sites on slopes steeper than 10% gradient are difficult to use and usually require complex and costly site preparations. Flat sites present serious problems for the drainage of waste and storm water. Avoid areas likely to become marshy or waterlogged during the rainy season.

33. Soils that allow swift surface water absorption are important for the construction and effectiveness of pit latrines. The subsoil should permit good infiltration (i.e. allowing water absorption by the soil, and the retention of solid waste in the latrine). It should be noted that very sandy soils which are good for infiltration are sometimes poor for the stability of the pit. Where drinking water supplies are drawn from ground water sources, special attention must be given to preventing contamination by pit latrines. The pit latrines must not reach into the ground water. The groundwater table should be a minimum of 3 m below the surface of the site.

34. Avoid excessively rocky or impermeable sites as they hamper both shelter and latrine construction. If possible, select a site where the land is suitable at least for vegetable gardens and small-scale

agriculture.

Accessibility

35. The site must be accessible and close to sources of necessary supplies such as food, cooking fuel and shelter material. Proximity to national services is desirable, particularly health care services. Roads must be "all-weather" providing year-round access. Short access roads to connect the main road with the site can be constructed as part of the camp development. There may be advantages in choosing a site near a town, subject to consideration of possible friction between local inhabitants and refugees.

Climatic Conditions, Local Health and Other Risks

36. Settlement areas should be free of major environmental health hazards such as malaria, onchocerciasis (river blindness), schistosomiasis (bilharzia) or tsetse fly. A site may have unseen and/or irregular (but often locally known) risks such as flash flooding, or serious industrial pollution. For sites in dust prone areas, regular dust clouds can foster respiratory diseases. Emergency and temporary shelter need protection from high winds,

however, a daily breeze is an advantage. Climatic conditions should be suitable year-round and careful account should be taken of seasonal variations: a suitable site in the dry season may be untenable in the rains. Likewise, mountainous areas may be suitable in summer, while in winter the temperatures may fall way below freezing. Seasonal variation can have a considerable impact on the type and cost of shelter, infrastructure, heating fuel and even diet. As far as possible, refugees should not be settled in an area where the climate differs greatly from that to which they are accustomed. For example, settling refugees from malaria-free high ground in a marshy area where the disease is endemic can be disastrous.

Vegetation

37. The site should have a good ground cover (grass, bushes, trees). Vegetation cover provides shade, and reduces erosion and dust. During site preparation, care should be taken to do as little damage as possible to this vegetation and topsoil. If heavy equipment is used, indiscriminate bulldozing or removal of top-soil has to be avoided at all costs. If wood must be used as domestic cooking fuel or for the construction of shelter, the refugees should be encouraged not to cover their needs at the site or in the immediate

vicinity. Rather, a more dispersed pattern of wood collection should be encouraged, in coordination with local forestry authorities (see section on site planning and management of natural resources below). A quick survey of vegetation and biomass availability for these purposes should be undertaken. The site should not be located near areas which are ecologically or environmentally protected or fragile.

Site Selection Methodology

Obtain agreement among the planning team on site selection criteria;

i. Prioritize the criteria list;

ii. Obtain suitable maps and other information showing topography, road networks, land use and water sources;

iii. Determine site characteristics through site visits, identifying any potential flaws that would exclude use of the site (e.g. no water, flood-prone);

iv. Make simple estimates of the surface area of each of the

potential sites, e.g. use vehicle trip-meter to estimate distances, or, if feasible, use other methods such as Global Positioning System (see chapter 11 on population estimation and registration);

v. Assess the implications of different layouts on the potential sites and rank the sites on the basis of the criteria list.

Site Planning: General Considerations

- **The overall physical layout of a site should reflect a decentralized community-based approach focusing on family, village or other social groups.**

- **Site planning should use the "bottom up" approach starting from the characteristics and needs of the individual family, and reflect the wishes of the community as much as possible.**

Introduction

38. The physical organization of the settlement will markedly affect the health and well-being of a community. Good site planning will

also facilitate an equitable and efficient delivery of goods and services.

Whatever the circumstances, the overriding aim must be to avoid high density refugee camps.

Master Plan

39. A "master plan" or overall site plan should show the overall configuration of the site, its surroundings and characteristics, and its location vis-a-vis natural and existing features including settlements. The plan should take into account the social organization of the refugees and principles of module planning, and should cover the following physical features.

40. Natural and existing features:

i. Contours (lines joining points of identical elevation are called contour lines);

ii. Rivers, forests, hills, flood plains, swamps;

iii. Rocky patches, sandy soils;

iv. Existing buildings, roads, bridges;

v. Farm land, electrical power grid, water pipelines.

41. Planned features:

i. Shelter areas, potential expansion areas;

ii. Roads and footpaths;

iii. Drainage system and terracing;

iv. Environmental sanitation plan;

v. Water distribution plan;

vi. Utilities, camp lighting, etc.;

vii. Administration areas;

viii. Educational and health facilities;

ix. Distribution points;

x. Feeding centres;

xi. Markets and recreation areas;

xii. Fire prevention breaks;

xiii. Agricultural plots.

42. A topographical and planimetric survey is crucial as the basis for site planning. The plan or map should have a metric scale between 1:1,000 and 1:5,000, and in case of large camps a scale of 1:10,000 or above. A topographical survey describes the physical features of a landscape (rivers, valleys, mountains). A planimetric survey describes locations within an area (e.g. the camp site).

Services and Infrastructure

43. The following are standards for services and infrastructure and should be referred to when preparing the master plan:

1 water tap	per	1 community (80-100 persons)

1 latrine	per	1 family (6-10 persons)
1 health centre	per	1 site (20,000 persons)
1 referral hospital	per	10 sites (200,000 persons)
1 school block	per	1 sector (5,000 persons)
4 distribution points	per	1 site (20,000 persons)
1 market	per	1 site (20,000 persons)
1 feeding centre	per	1 site (20.000 persons)
2 refuse drums	per	1 community (80- 100 persons)

44. There are two situations for which planning is required:

i. Reorganizing existing spontaneously developed sites;

ii. New sites.

The design standards to be applied should be the same in each case, although methods, approach and timing, may differ substantially.

45. Where refugees have spontaneously settled they may be understandably reluctant to relocate. In such cases involvement of

representatives of the refugees in planning will usually facilitate a better understanding and acceptance by the refugees of priority changes. An early and clear demarcation of plots, including areas reserved for services, is advisable.

Comprehensive but swift planning is essential for a new site.

Modular Planning

46. Planning should start from the perspective of the individual refugee family. Begin by considering the needs of the individual household, such as distance to water and latrines; the relationship to other members of the community (other relatives, clan, or ethnic groups); and traditional housing and living arrangements. Developing the community layout in this way, and then considering the larger issues of overall site layout, is likely to yield much better results than beginning with a preconception of the complete site layout and breaking it down into smaller entities.

47. Thus planning and physical organization of the site should start from the smallest module, the family, and then building up larger units as follows:

Module	Consisting of	Aprox. No. Of persons
Family	1 family	4-6 persons
1 community	16 families	80 persons
1 block	16 communities	1,250 persons
1 sector	4 blocks	5.000 persons
1 camp module	4 sectors	20.000 persons

These figures are indicative and should be adjusted according to actual conditions.

48. Modular planning does not necessarily mean using a grid layout for the site. The linear or grid layout, with square or rectangular areas separated by parallel streets, has often been used for its simplicity of design and speed of implementation. However, every effort should be made to avoid a rigid grid design which promotes high density settlements since environmental health problems and disease are directly proportional to population density. Whatever design is used should take account of the natural features of the site and of the identity of the refugee community.

49. The social organization, background and family structure, are all factors that will influence the physical layout of a site. Initially, this information, which is part of the basic problem and needs assessment should be gathered through discussions with the refugees and others knowledgeable about their society. A full socio-economic survey of the refugee population should be conducted once resources allow, and will be important in subsequent planning, particularly for self-reliance and durable solutions.

Environmental Considerations

50. Environmental considerations have to be integrated into physical planning and shelter from the very start of an emergency. Location and layout of refugee camps, provisions made for emergency shelter, and the use of local resources for construction and fuel, can have a major negative environmental impact. It is in the earlier stages of an emergency where the greatest environmental damage can occur:

This environmental damage has health, social and economic consequences for the refugees and local population, and can have political repercussions.

51.

Rehabilitation effectively starts in the emergency phase, and the costs of environmental damage can be substantially reduced by early environmental action in an emergency.

52. In order to safeguard the welfare of refugees and local population by protecting their environment, the following steps can be taken:

i. Site selection: avoid environmentally protected areas. Where possible, a site should be located a day's walk from protected areas or reserves;

ii. Site preparation: preserve existing vegetation and top-soil;

iii. Camp density and size: generally, the smaller the settlements the better;

iv. Camp layout: the layout (particularly roads) should follow the contour lines. This will reduce erosion and preserve

topsoil, and avoid the creation of dangerous gullies. A site layout that encourages clustered living arrangements (which can also promote security) promotes sharing of resources including cooking which reduces fuel consumption;

v. Shelter design (energy saving through insulation): In cold climates, with extended winter seasons where continuous heating is needed, passive energy saving measures, e.g. sufficient insulation of roof, walls, floors can be extremely fuel saving and cost-effective over time;

vi. Shelter and fuel: The materials for these often come from the immediate surroundings of the camp. It is crucial to initiate at the outset a system managing and controlling the use of local natural resources including wood for construction and fuel. Meeting the initial need for shelter materials from the local resources can be particularly destructive - so collection of such materials should be carefully managed, and/or materials should be provided from an alternative source.

53. A simple natural resources management plan should be drawn

up as soon as possible. A key feature of a basic plan will be controlled harvesting and collection of fuel-wood and timber. This should be discussed with government bodies, such as forestry departments. Controlled fuel-wood and timber harvesting in the vicinity of the camp can include: defining certain areas and trees (by marking) which should not be harvested, allowing only dead wood to be collected; establishing an environmental awareness programme to define clear rules from the outset regarding harvesting fuel-wood and to encourage respect for the local resources; assigning responsibility for managing and harvesting certain areas to certain groups.

54. The decision on supplying fuel-wood from outside the vicinity of the camp (e.g. trucking in wood), how to supply it and the quantity which is necessary, must be taken according to the specifics of the situation. The organized supply of fuel-wood or other fuel such as kerosene can have complex repercussions and should be instituted with care. Organized supply of free fuel on a regular basis is only appropriate in certain circumstances: for example, where there are severe restrictions on fuel from other sources. Where fuel-wood is also readily available locally, its distribution free of charge from outside the vicinity may actually lead to increased consumption. In

addition, refugees rely on local natural resources for income, therefore if free fuel-wood is provided for cooking purposes, collection of wood will continue for income generating purposes (e.g. the sale of fuel-wood or timber, charcoal making, etc.). To retain its value therefore, fuel-wood should generally be supplied in return for work.

55. The source and impact of wood supplied to the refugees needs also to be considered:

i. Is it being harvested sustainably?

ii. Are the environmental problems merely being moved elsewhere?

Care should be taken to prevent emergence of local monopolistic suppliers. Finally, it should be remembered that, if it is necessary to introduce free fuel supply in the initial stages of an emergency, it will be difficult to later modify such arrangements.

56. A more comprehensive natural resource management plan for the site and its immediate surroundings should be drawn up as soon

as possible (with specialist advice if necessary).

Such a plan should be based on a baseline environmental survey.

The comprehensive natural resource management plan would cover, in addition to controlled harvesting of timber for fuel mentioned earlier: promotion of fuel saving stoves and fuel efficient cooking techniques, supply of key energy saving devices (e.g. lids with cooking pots, provision of mills or milled grain), awareness raising programmes, identifying the scope for better use of existing natural resources (e.g. using waste water, common areas, and areas around shelters), for kitchen gardens and tree planting, and reforestation where necessary.

Gender Considerations

57. In emergencies there may be a loss of normal community participation and the changes in demographic proportions may have altered values and principles. This may mean disruption of traditional mechanisms for the protection and assistance of women. This change of social patterns in refugee communities may also result in:

i. Increased numbers of female headed households;

ii. Large numbers of unaccompanied children;

iii. Shortage of men;

iv. Disruption of the extended family, with its role as social caretaker.

58. It is important that the needs of women are taken into account in site planning. It may be difficult to reach women if they do not traditionally form part of the leadership structure of the community. In such cases the community extension workers should be able to assist in obtaining views on the protection and security of women.

59. Among the refugees may be those who are unable to build their own shelters because of vulnerabilities. Specific actions should be taken to ensure that the refugee community themselves are organized to assist the more vulnerable refugees with their shelter construction.

Site Planning: Specific Infrastructure

- **Under-estimation of surface area required for social infrastructure and communal services is a common problem.**

60. At the start of an emergency it may be difficult to foresee all the administrative and communal services that are likely to be required. Where adequate space is available, free areas should be allocated for future expansion of these services. Under-estimation of the space required for future communal needs is a common problem in sites of limited area.

Sanitation

61. While water requirements often determine site selection, sanitation requirements often dictate site layout. High population density together with poor sanitation is a severe threat to health and safety of the refugees. This is often the case when sites have developed in an unplanned way. Minimal organization of basic sanitation should be introduced before reorganizing the site or transferring the refugees to a new site. This should include prohibiting uncontrolled defecation and the establishment of public latrines. Sufficient space must be left for replacement latrines. If communal latrines are unavoidable, there should be a plan for their

maintenance and they should be accessible by road to facilitate this.

62. For all sites, new or reorganized, the goal should be one latrine per family. Only if the latrine remains under the control and maintenance of a family group is safety and hygiene assured in the long run. The ideal location of the family latrine is on the family plot, as far as possible from the shelter.

Water Supply

63. Where possible, the maximum distance between any shelter and a water distribution point should be not more than 100 m, no more than a few minutes walk. The layout of the site should contain the water distribution grid as an integral part of the service plan and the pipes should be underground. Water pipes should be kept at a depth that traffic or other surface activities do not cause damage (40 to 60 cm). In countries with very low temperatures, the pipes must be positioned at frost free depth (60 to 90 cm). Experience shows that water distribution to small, socially cohesive groups of 80 to 100 persons reduces water wastage considerably and reduces destruction of taps, standposts and concrete aprons. The water distribution point is more likely to be kept well drained and hygienic

and the waste water used to irrigate communal or individual vegetable gardens.

64. Effluent and used water from water supply points should be well drained and eventually absorbed in soakage pits or gardens.

Roads

65. A site should have access and internal roads and pathways connecting the various areas and facilities. Accessroads should be all-weather roads above flood levels and have adequate drainage. If there has to be a significant amount of vehicle traffic on the site, it should be separated from pedestrian traffic. All structures, including fences, should be set back some 5 to 7 m from roads to provide adequate visibility for pedestrians and vehicles.

Fire Prevention

66. As a rule of thumb a firebreak (area with no buildings) 30 m wide is recommended for approximately every 300 m of built-up area. In modular camps firebreaks should be situated between blocks. This area will be an ideal for growing vegetables or

recreation. If space allows, the distance between individual buildings should be great enough to prevent collapsing, burning buildings from touching adjacent buildings. The distance between structures should therefore be a minimum of twice the overall height of any structure, if building materials are highly inflammable (straw, thatch, etc.) the distance should be increased to 3 to 4 times the overall height. The direction of any prevailing wind will also be an important consideration.

Administrative and Communal Services

67. Buildings for administrative and communal services should be traditional structures, if possible of a multipurpose design to facilitate alternative uses. For example, buildings for initial emergency services could later be used as schools or other community facilities. The following list includes administrative and communal services most often needed, the division is indicative only - the importance of maximum decentralization has already been stressed. Whether centralized or decentralized, administrative and other facilities should be located and designed so as they are accessible to women as well as men.

68. Services and facilities likely to be centralized are:

i. Site administrative office;

ii. Services coordination offices for health care, feeding programmes, water supply, education, etc.;

iii. Warehousing and storage;

iv. Initial registration/health screening area;

v. Tracing service;

vi. Therapeutic feeding centre (if required).

69. Services and facilities likely to be decentralized:

i. Bathing and washing areas;

ii. Supplementary feeding centres (if required);

iii. Education facilities;

iv. Institutional centres (e.g. for the disabled and

unaccompanied children, if required);

v. Recreation areas;

vi. Commodity distribution centres.

70. The location of the centralized services will depend on the specific situation and in particular on the space available. Where sufficient space is available, there may be clear advantages in having the centralized services in the centre of the camp. Where space is scarce, it may be better to have the centralized services located near the entrance to the camp. In particular, this will avoid the trucks delivering supplies having to drive through a densely populated site, with the attendant problems of dust, noise and danger to pedestrians. If some form of closed camp is unavoidable, at least the centralized administrative services will probably have to be located near the entrance. The warehouses should always be near the administrative office for reasons of security.

Shelter

- **Refugee shelter must provide protection from the elements,**

space to live and store belongings, privacy and emotional security;

- **Blankets and clothing must be provided if necessary;**

- **Refugee housing should be culturally and socially appropriate and familiar. Suitable local materials are best, if available;**

- **Shelter must be suitable for the different seasons;**

- **Except for tents in certain circumstances, prefabricated or special emergency shelter has not proved to be a practical option on either cost or cultural grounds;**

- **Wherever possible, refugees should build their own housing, with the necessary organizational and material support.**

Introduction

71. Shelter must, at a minimum, provide protection from the elements, space to live and store belongings, privacy and emotional

security. Shelter is likely to be one of the most important determinants of general living conditions and is often one of the largest items of non-recurring expenditure. While the basic need for shelter is similar in most emergencies, such considerations as the kind of housing needed, what materials and design are used, who constructs the housing and how long it must last will differ significantly in each situation.

72. Particularly in cold climates or where there are daily extremes of temperature, lack of adequate shelter and clothing can have a major adverse effect on health and nutritional status.

Thus, in addition to shelter, provision of sufficient blankets, appropriate clothing and heaters will be a high priority.

73. The first steps are to assess the adequacy of any emergency shelter arrangements refugees have already made themselves, and to meet immediate needs through provision of simple local materials.

The key to providing an adequate shelter is provision of a roof.

If materials for a complete shelter cannot be provided, provision of adequate roof materials will be the priority, as walls can usually be made of earth or other materials found on site or locally available.

74. Wherever possible, refugees should build or assist in building their own housing, with the necessary organizational and material support. This will help to ensure that the housing will meet their particular needs, will reduce their sense of dependence, and can cut costs considerably.

Type of Shelter

75. Individual family shelter should be always preferred to communal accommodation as it provides the necessary privacy, psychological comfort, emotional safety and a territorial claim for future security. It provides safety and security for people and possessions and helps to preserve or rebuild family unity.

76. Emergency shelter needs are best met by using the same materials or shelter as would be normally used by the refugees or the local population. Only if adequate quantities cannot be quickly obtained locally should emergency shelter material be brought into

the country. The simplest structures, and labour-intensive building methods, are to be preferred. Materials should be environmentally benign or gathered in a sustainable manner.

Standards

77. At the beginning of an emergency, the aim should be to provide sufficient materials to the refugees to allow them to construct shelter meeting at least the minimum standards for floor space, which in emergencies are:

i. minimum of 3.5 m^2 per person in tropical, warm climates, excluding cooking facilities or kitchen (it is assumed that cooking will take place outside);

ii. 4.5 m^2 to 5.5 m^2 per person in cold climates or urban situations including the kitchen and bathing facilities.

78. The design of shelter should if possible provide for modification by the occupants to suit their individual needs. In cold climates, for example, it is very likely that people, in particular children and old people, remain inside the shelter throughout the day, hence more

space is required.

Plastic Sheeting

79. Plastic sheeting has become the most important shelter component in many relief operations. In urban areas roofs can be repaired with specialized UV-resistant heavy duty plastic sheeting. Windows can be repaired with translucent reinforced panels. Tents and emergency shelters can be covered with highly reflective UV-resistant woven plastic tarpaulins.

80. Wooden support-frames and stick skeletons for these shelters, if collected from surrounding forests, can harm the environment considerably. It is therefore important to always supply frame material (which is sufficient to support plastic). The frame material should come from sustained, renewable supply sources. Bamboo is ideal, if available. Standard specifications for plastic sheeting can be found in Annex 1 to chapter 18 on supplies and transport.

Tents

81. Tents may be useful and appropriate for example when local

materials are either not available at all or are only seasonally available or for refugees of nomadic background. The life-span of an erected tent depends on the climate and the care given by its occupants; it may be as long as 2 to 3 years. Where tents are used, repair materials should be provided to the occupants. A group of tents may also serve as transit accommodation while more appropriate shelter is constructed. Standard specifications for tents can be found in Annex 1 to chapter 18 on supplies and transport.

82. Tents should be covered with an outer fly to shade and protect the tent below. The tent should provide free standing height all over the floor area. Tents are difficult to heat as canvas walls and roof cannot provide insulation against heat loss. However, it is possible to some extent to heat a good, well sealed tent, if enough heat is produced in a tent stove. This stove needs fuel (usually wood or kerosene) around the clock to maintain a comfortable temperature. The fuel cost will be high. Therefore tents are not suitable as cold climate shelters, but if there is no choice, they can save lives and bridge the time until more suitable shelters are established.

Prefabricated Shelters

83. Neither pre-fabricated building systems nor specially developed emergency shelter units, even winterized shelter units, have proved effective in large scale refugee emergencies. Reasons include:

i. High unit cost;

ii. Long shipping time;

iii. Long production time;

iv. Transport problems including cost of transport;

v. Inflexibility.

Usually emergency shelter arrangements will have been made before these systems can arrive.

Shelter for Cold Conditions

84. Climates where cold weather with rain and snow prevails over extended periods (3 to 5 months), demand that people live primarily inside a house. In particular, the more vulnerable persons such as the elderly, small children, the sick and the handicapped need

heated, enclosed spaces.

85. Shelters which are sufficient to withstand cold conditions have to be of a high standard and are complex and expensive to build. The following should be considered:

i. Wind protection of walls, roofs, doors and windows;

ii. Insulated enclosed space, with simple dividers;

iii. Heating stoves;

iv. Structural stability (to withstand snow- and wind-loads);

v. Protected and heated kitchens and sanitary facilities.

86. To help people survive the impact of cold weather in an emergency, a strategy should focus on the following:

i. Individual survival.

It is extremely important to protect the human body from loss of heat. Particularly during sleep, it is important to be

able to keep warm, by being able to generate and retain body heat with blankets, sleeping bags, clothing and shoes, and food with high calorific value;

ii. The living space.

It is very important to concentrate on a limited living space and to ensure that cold air can be kept out of this space. This can be done by sealing the room with plastic sheeting and sealing tapes. Windows and doors should be covered with translucent plastic sheeting, stapled on window and door frames. Large rooms should be subdivided, with the help of plastic sheets or blankets. New structures should be constructed with a sealed space to keep the cold air out. Walls, ceilings and floors of the living space should be designed to insulate from cold air and to retain warm air as efficiently as possible;

iii. Heating.

Keeping the inside of a shelter at a, comfortable temperature (15 to 19° C) depends to a large extent on the outside

temperature, the type of construction, the quality of insulation, the orientation of the building, and on the type and capacity of the stove. Depending on these conditions, a stove with 5 to 7 kW performance should have the capacity to heat a space of 40 to 70 m^2 in most cold areas. Usually the stove for heating is used for cooking and baking as well.

87. For reasons of safety, convection stoves are recommended over radiation stoves. Fuel efficiency is very important as fuel may not be readily available, and its supply can pose major logistical problems. Overlooking regular fuel supply in the beginning can have very negative environmental consequences.

Reception and Transit Camps

88. Reception and transit camps are used where it is necessary to provide temporary accommodation for refugees. These camps might be necessary at the beginning of a refugee emergency as a temporary accommodation pending transfer to a suitable, safe, longer term holding camp, or at the end of an operation, prior to repatriation, as a staging point for return. Reception and transit camps are therefore usually either intermediate or short term

installations.

89. Whether the transit camp is used in an emergency or as part of a repatriation operation, the camp should be designed for short stays of 2 to 5 days and a high turnover rate.

90. The required capacity of a transit camp will depend primarily on how many people will be channelled through the camp and in what time. This will depend on the absorption or reintegration capacity at the receiving end as well as the total time foreseen to carry through the operation.

91. The primary criteria for site selection for a transit camp are:

i. Good access (road, port, airport);

ii. The availibility of water;

iii. Good drainage (minimum 2% slope);

iv. Adequate conditions for sanitation.

92. The transit camp must be strictly functional and equipped with

considerably higher construction standards than regular refugee camps. Operational maintenance must be fully supplied through the camp management. In particular, cleaning and disinfection of accommodation and sanitation areas need to be carried out on a regular and ongoing basis. Prepared food should be provided and individual food preparation should be prohibited. The transit camp will therefore need kitchen facilities, wet food distribution and a hall for food consumption. In view of the expected short-term stay, a minimum of 3 m^2 per person is needed.

93. Standards for the construction of transit facilities are:

Accommodation: in barracks, long houses (open plan or subdivision for groups/families of 5 persons) heated in cold climates. For example, a tent of 85 m^2 can accommodate approximately 14 to 25 persons;

i. Sanitation: 20 persons per latrine, 50 persons per shower. Regular and intensive maintenance is required;

ii. Water supply: absolute minimum provision of 7 litres/person/day plus water required for kitchens, cleaning

and sanitation;

iii. Food preparation: approximately 100 m^2 per 500 persons;

iv. Storage: 150 to 200 m^3 per 1,000 persons;

v. A public address system;

vi. Lighting;

vii. Arrival zones and departure zones which are separated from accommodation zones;

viii. Administrative offices and staff accommodation;

ix. One health post;

x. Security fencing (depending on circumstances).

Public Buildings and Communal Facilities

- **Public buildings should be used only as short term accommodation to gain time to provide more suitable**

shelter;

- **Right from the beginning, intensive maintenance of infrastructure and utilities should be provided;**

- **The UNHCR shelter standards should be applied.**

94. Public buildings such as schools are sometimes used initially as shelter. This is particularly the case in cold conditions which demand very rapid shelter response.

95. Where possible such accommodation in public buildings should be a temporary solution. The supporting infrastructure of the building (water, electricity, sanitation) will deteriorate very quickly with concentrated use, to the extent that living conditions can become dangerously unhealthy. The buildings decay rapidly primarily because they are unsuited to such large numbers and lack the necessary infrastructure and utilities. In addition the very low sense of responsibility by its inhabitants contributes to the deterioration.

96. The normal use of the building has to be suspended with various

social and economic consequences (the buildings might otherwise be used for example as schools, sanatoria, workers' or students' dormitories, sports halls and hotels). Both local and national governments are therefore reluctant to transform public buildings into humanitarian shelter.

97. In order to ensure a healthy environment, it is particularly important to ensure regular operational and preventive maintenance in public buildings. Neglecting to maintain a building from the outset can have serious health consequences for the refugees, and economic consequences for the host government.

98. The UNHCR minimum shelter standard of some 3.5 to 5.5 m^2 per person should be applied, as well as the standard for public sanitation (maximum 20 persons per toilet/latrine). Public buildings, such as schools, are not equipped to serve the sanitation needs of large populations including basic toilet use, as well as personal hygiene such as laundry and cleaning dishes.

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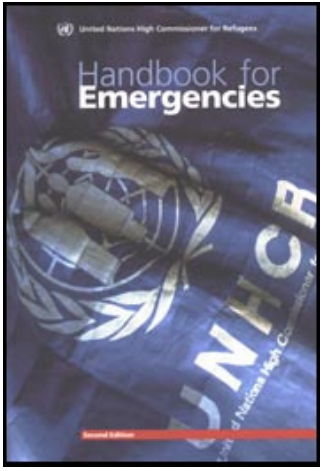

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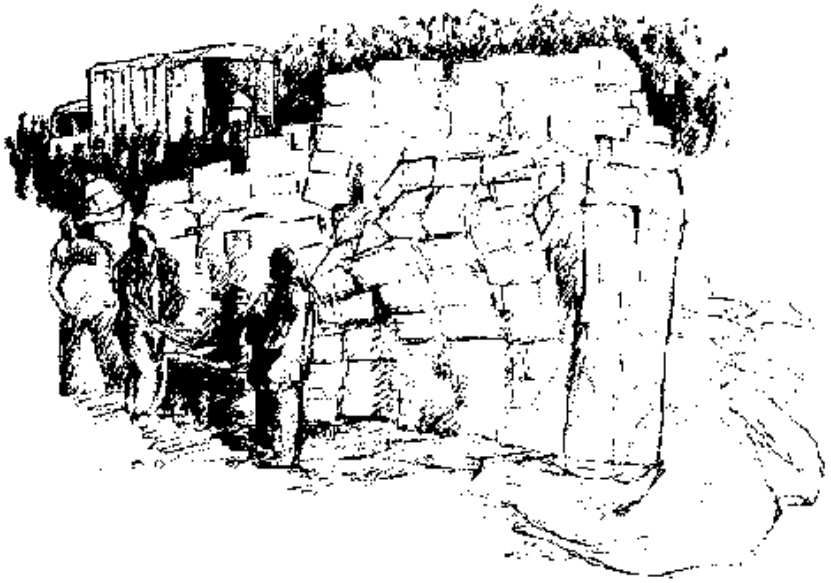
13. Commodity Distribution



Figure

Overview

Situation

Emergency situations are characterized by an urgent need to distribute life sustaining commodities such as food, shelter materials, cooking implements and fuel. The fair distribution of

commodities is often problematic and groups and individuals from among the refugees can use the confusion of the emergency to obtain unfair control over the resources which are distributed.

Objectives

To provide life-sustaining commodities to the refugee families, fairly, according to specified rations, selection criteria and priorities.

Principles of response

- **The design of the distribution system should be based on a thorough understanding of the social structure of the refugees;**

- **The refugees should be kept continuously informed on the design of the distribution system, on the timing of distributions and on the quantity of commodities to be distributed;**

- **All groups among the refugees should be appropriately involved in the design and operation of the distribution system. Particular care must be taken to involve women;**

- **The family as the basic social unit plays the key role in meeting basic needs of individuals, therefore, the family unit should be the target of commodity distribution;**

- **The commodity distribution cycle should be regular and predictable. Irregularities in the distribution cycle increases the tendency of the refugees to circumvent the system.**

Action

- **Use community services structures (or set up new structures if necessary) to consult the refugees on the design and operation of the commodity distribution system;**

- **Select and implement a commodity distribution system;**

- **Set up a system by which information on the operation of the commodity distribution system can be regularly conveyed to the mass of the refugees;**

- **Allow the refugees themselves to monitor the fairness of the distribution system.**

Introduction

- **Distribution passes control over a commodity to the intended beneficiaries. Distribution must be fair, and commodities must be distributed according to specified rations, selection criteria and priorities;**

- **Distribution must be monitored to ensure that it is fair and reaches vulnerable groups;**

- **However ingenious the distribution system devised, it is unlikely to work fairly without the support of the refugees themselves;**

- **UNHCR's distribution systems should provide material assistance to and through families.**

1. The principles in the chapter apply to the distribution of both food and non-food items, although food often forms the bulk of the commodities distributed. This chapter provides brief guidance on the subject. The handbook "Commodity Distribution: A Practical Guide For Field Staff" is essential reading for those who plan to set

up and run a commodity distribution system (see Key References at the end of the chapter).

When to start distribution

2. There is usually a degree of uncertainty when planning distributions. Ideally, distribution of commodities should start only after a full needs assessment has taken place and when the size of the beneficiary population is accurately known. However, the reality of almost all emergency programmes is that distributions must start prior to these ideal conditions being reached. Try not to start distribution until there is at least a minimum framework in place to build upon, and a plan as to how subsequent distributions will be improved.

Choosing a Commodity Distribution System

3. Two basic issues are:

i. How much responsibility should be given to the refugees themselves; and,

ii. What resources are available to set up and run the system

(including time, space, experienced staff as well as financial resources (see Table 1).

4. There are three broad categories of distribution system (see Table 1). Note that the head of family can either be a woman or a man.

Distribution systems can be classified according to who receives the commodities.

5. There will probably be a period in the early stages of an emergency when it will not be possible to register or issue ration cards. However, effective distribution of commodities is possible without ration cards.

Table 1 - Commodity Distribution Systems

Through Group Leadership	**Through Groups of Heads of Family**	**Through Individual Heads of Family**
System Description		
Commodities are given in	All of the commodities	Commodities are

bulk to a representative of a large group of beneficiaries who further divides it among the group.	for the group of families are handed over to a representative of the group. The group usually con- sists of about 20 heads of family. The commodities are then im- mediately redistributed to the individual family heads by the representatives.	handed over directly to each family head.
Types of situation in which these systems have been used		
• Early days of an emergency. • Mass influx of refugees.	• When the population is comparatively stable, and/or	• When the population is comparatively stable,

• No formal registration. • Large populations.	have ration cards. • Where the beneficiaries are living in camps. • Where the population is comparatively homogeneous.	and/or have ration cards. • Where the beneficiaries are living in camps, settlements or integrated within the local population.
	Amount of resources needed increases	
	Degree of self regulation by refugees increases	

Components of Distribution Systems

General Considerations

6. The ideal distribution system should be safe and easily accessible to the intended beneficiaries.

- **Safe: Distribution should be organized in such a way that the system is safe for all who use it. Particular attention should be given to women and the vulnerable;**

- **Accessible: Distribution points should be close to where people live and located so that the access of particular groups is not restricted. The timing of distributions should suit the beneficiaries.**

7. The refugees themselves can provide the most effective monitoring and control of the distribution system. In order to do this they must be informed as to the type and quantity of commodities to be distributed and method and timing to be used.

A system needs to be put in place whereby the refugees can be continuously informed of changes in the quantity, type or method Of distributions.

8. In the early stages of a new operation, particularly in large emergencies, effective control over distribution may not be possible. However, from the start, each action taken should contribute to a process whereby control by UNHCR is progressively established. For example the provision of plastic sheeting, tents and other shelter material is very important because it reduces the mobility of the population. Once it is issued, the population can settle and commodity distribution and other services will be easier to

organize.

Refugee Involvement

9. Ensure the refugees are well informed (both women and men). They must know what they should receive, how much, when and how. This information should come to them directly rather than through their leadership.

The refugees should be able to see the distribution process for themselves as they are the best monitors and controllers of the process.

Ensure that the refugees participate at all levels of the distribution process. However, be aware of the dangers of non-representational leadership (see chapter 7 on coordination and site level organisation).

10. Irregularities in the distribution cycle undermine the confidence of the beneficiaries and increase their need to circumvent the system.

Logistical Considerations

11. In camps, the distribution system should allow beneficiaries to collect rations close to where they live (not more than 5 km away) and at regular monthly intervals. For dispersed populations refugees should not have to travel more than 5 to 10 km to distribution sites.

12. In the case of food distribution, it is usually preferable to distribute dry uncooked rations in bulk. Avoid mass cooked food distribution for the general ration (see chapter 15 on food and nutrition).

Managerial Considerations

13. Distributing relief commodities involves several organizations and many individuals, for example, the government, WFP and NGOs. Co-ordination structures must be put in place, including regular meetings of all interested parties. The frequency of these meetings will depend on the situation. At the start of an emergency daily meetings will probably be needed. As the situation normalizes the frequency of meetings can be reduced to one per month.

14. It is important to understand the roles and responsibilities of the main actors involved at various stages of commodity distribution. In the case of food distribution the modalities of distribution as well as the reporting requirements are set out in a tripartite agreement between UNHCR, WFP and the implementing partner. The respective roles of UNHCR and WFP in relation to food aid are set out in their Memorandum of Understanding (Appendix 3). See Chapter 15 on food and nutrition for more information on food distribution and on of the role of WFP.

15. The family, as a basic social unit, is the target of distribution. This applies to food and non-food items. Providing assistance to and through families is effective as the basis for the distribution system and also supports the family unit. However this does not mean that the ration has to be handed to each family directly. In some situations distribution can be more effective through groups of families or other community structures.

16. Avoid payment in kind to distribution workers. It makes monitoring difficult and, in times of shortages, vulnerable people may be deprived of commodities in order to pay staff.

17. In camps, aim to have at least 1 distribution site per 20,000 refugees.

18. Plan to have a minimum of 2 distribution staff per 1,000 beneficiaries.

The Role of Refugee Women

UNHCR Policy

19. UNHCR's policy is to ensure the maximum possible appropriate involvement of refugee women in all aspects of distribution. Determining the nature of this involvement requires consultation with refugee women and men and a careful evaluation of the totality of the needs and responsibilities of refugee women and their families. Failure to take these considerations into proper account can have negative implications that go well beyond the distribution system itself.

20. In the great majority of refugee communities, the objective of fair distribution will be best served by having an appropriate balance of men and women. However, it is normally women, and in

particular single female heads of household, who are either under-represented or excluded.

Areas of Women's Involvement

21. There are three areas where refugee women can be involved:

- **In the decision-making processes and monitoring;**
- **In the distribution itself (women supervise and/or hand out the commodities); and,**
- **In collecting the commodities (where they are distributed to women not men).**

22. Women must be directly involved in decision-making and monitoring, including being involved in planning the system and determining their own participation in its implementation. Women should be members of the commodity distribution or food committees.

23. Women should choose representatives who will be involved in the distribution itself. The extent and nature of this participation

will depend on factors specific to that situation.

24. If women themselves feel that the most effective way to ensure that they receive their fair share and to retain control of its use thereafter, is by actually collecting, or at least being present at the distribution of food and non-food items for their household (whether or not they are its head), this should be ensured.

Monitoring

25. Monitoring the distribution system is an important management responsibility of UNHCR. General principles of monitoring are described in chapter 8 on implementing arrangements. Monitoring distribution includes monitoring the actual distribution of the commodity and spot checks in the camps on distribution days. See chapter 15 on food and nutrition, and "Commodity Distribution: A Practical Guide For Field Staff", for more details about monitoring distribution systems.

Key References

***Commodity Distribution: A Practical Guide For Field Staff,* UNHCR,**

Geneva, 1997.

***Memorandum of Understanding on the Joint Working Arrangements for Refugee, Returnee and Displaced Persons Feeding Operations,* UNHCR, Geneva, 1997.**

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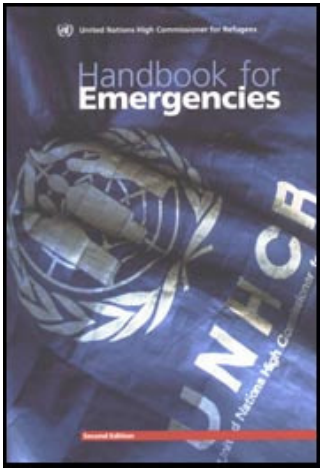

- **Health Assessment, Planning, Monitoring and Surveillance**
- **Main Health Programmes**
- **Organization of Refugee Health Care**
- **Human Resources and Coordination**
- **Key References**
- **Annexes**

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14. Health

Figure

Overview

Situation

It is well known from experience that emergencies result in excess

loss of life (high mortality) and increased incidence of diseases (high morbidity). The diseases mainly responsible for high mortality and morbidity are measles, diarrhoeal diseases (including cholera), acute respiratory infections (pneumonia), malnutrition and malaria. The factors which increase the risk of disease and which should be addressed in any emergency response include an unfamiliar environment, poverty, insecurity, overcrowding, inadequate quantities and quality of water, poor environmental sanitation, inadequate shelter and inadequate food supply.

Objectives

- **To promote the enjoyment of the highest attainable standards of physical and mental health[1], and to prevent excess mortality and morbidity.**

Principles of Response

- **Priority should be given to a Primary Health Care (PHC) strategy focusing on the vital sectors of water, food, sanitation, shelter and physical planning. In addition, preventive and basic curative health services should be**

provided. The health of the majority of the refugees is more likely to be affected by these measures than by individual care;

- **Refugee participation in the development and provision of health services is essential;**

- **Services provided for refugees should be at a level equivalent to that appropriate to host country nationals - i.e. there must be *parity*;**

- **The health programme should also be *sustainable.* It is sometimes better not to start activities which cannot be maintained, than to cease supporting activities which both implementing partners and beneficiaries have come to take for granted;**

- **The health services must be of a quality that ensures that programmes, providers and institutions respect patients' rights and comply with nationally and internationally accepted health standards and principles of medical ethics;**

- **Many countries will not have sufficient human and material resources to respond adequately to the extraordinary needs generated by an emergency. Experienced national and international NGOs should be mobilized to initiate urgent life saving measures. Rapid integration with the Ministry of Health (MOH) is essential;**

- **Health services should take into account the particular vulnerability of children under five years during emergencies. Priority should be given to immunizations, feeding programmes, oral rehydration therapy, Vitamin A prophylaxis, basic curative care and family health;**

- **Health services should also take into account the special needs of women who play a central role as primary health care providers and at the same time bear a disproportionate share of suffering and hardship;**

- **A UNHCR Health Coordinator should be appointed with responsibility for the health programme and for ensuring that nationally and internationally accepted standards and best practice are adhered to, in close coordination with the**

national health authorities and other organizations.

Action

- **Assess the health and nutritional status of the population and identify the critical health risk factors in the environmental conditions;**

- **Establish priority needs, define the required activities to meet those needs and determine the required human, material and financial resources to perform these activities;**

- **In accordance with these activities, set up community-based health services and devise the appropriate organizational and coordination mechanisms both with the health partners and the other relevant sectors of assistance;**

- **Promote basic health education for the refugees and train refugee health workers;**

- **Monitor and evaluate the effectiveness of the services and adjust as necessary;**

- **Ensure that decisions about the health services are based on proper assessment and surveillance;**

- **Communicate information about the emergency situation and the health services for advocacy purposes.**

[1] ***International Covenant on Economic, Social and Cultural rights", 1996, Article 12.***

Introduction

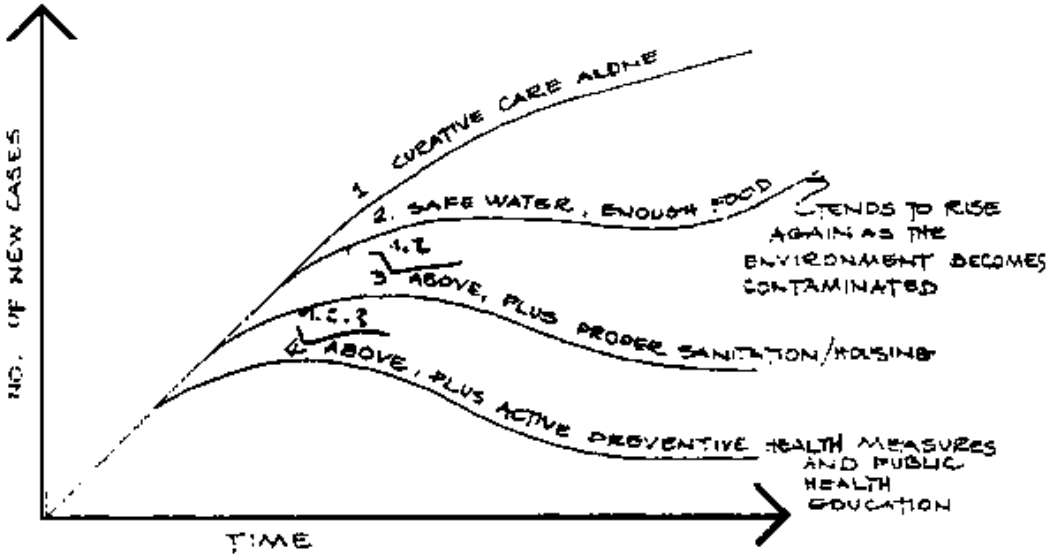
1. Good health, depending as it does on so many non-medical factors, is too big a subject to be left only to medical workers. This chapter is directed at non-specialist staff in the field. It does not pretend to give "medical answers" to health problems. It does however seek to show that proper assessment of problems, needs and resources, appropriate organization and coordination of public health and medical services based on a Primary Health Care (PHC) strategy are more important to the overall health status of refugees than curative medicine alone, see figure 1. These crucial organizational factors are often the responsibility of non-medical UNHCR staff.

2. In an emergency, many refugees will be exposed to insecurity, poor shelter, overcrowding, lack of sufficient safe water, inadequate sanitation, inadequate or inappropriate food supplies and a possible lack of immunity to the diseases of the new environment. Furthermore, on arrival, refugees may already be in a debilitated state from disease, malnutrition, hunger, fatigue, harassment, physical violence and grief. Poverty, powerlessness and social instability, conditions that often prevail for refugees, can also contribute to increased sexual violence and spread of sexually transmitted diseases including the Human Immuno-deficiency Virus (HIV).

3. The World Health Organization (WHO) has summarized the concept of Primary Health Care as follows: "PHC is essential health care made accessible to everyone in the country; it is given in a way acceptable to individuals, families, and the community, since it requires their full participation; health care provided at a cost the community and the country can afford. Though no single model is applicable everywhere, Primary Health Care should include the following: promotion of proper nutrition, an adequate supply of safe water, basic sanitation, reproductive and child care, including family planning, appropriate treatment for common diseases and injuries,

immunization against major infectious diseases, prevention and control of locally endemic diseases, education about common health problems and what can be done to prevent and control them".

At the heart of such a strategy there is an emphasis on preventive, as against curative care alone.



7-1 LIKELY RELATIVE IMPACT OF HEALTH MEASURES

Figure

Health Assessment, Planning, Monitoring and Surveillance

- **An assessment of the health and nutritional status is an**

essential start to the provision of health services;

- **This must be done by experts with experience of emergencies and, if possible, local knowledge;**

- **The factors affecting the health of the refugees must be identified and a surveillance and reporting system established.**

Initial Assessment

4. First, information should be obtained on the number of refugees[2] segregated by age (percentage of children under five years of age) and sex (male/female ratio). See chapter 11 on registration for more information on estimating the total number of refugees.

Age/sex breakdown can be estimated from:

i. Information collected during surveys;

ii. Information collected during mass immunization campaigns;

iii. Mass health screening on arrival;

iv. Information collected by community health workers.

5. The aim of the initial health assessment is to identify basic problems and needs and to establish priorities. It should be carried out by people with appropriate qualifications and relevant experience. There are obvious advantages in using national or locally-based personnel, but appropriate outside expertise can be made available quickly and should be requested through the Health and Community Development Section at Headquarters if necessary.

6. The priority should be to evaluate the incidence of the major causes of excess mortality and morbidity - measles, diarrhoeas, pneumonia, malaria and malnutrition.

7. Relevant information can be obtained from:

i. Direct observation;

ii. Reviewing baseline information regarding the country/areas of origin and asylum;

iii. Analyzing records at health facilities and interviewing health workers;

iv. Undertaking sample surveys (nutrition and mortality). These must be done by experts;

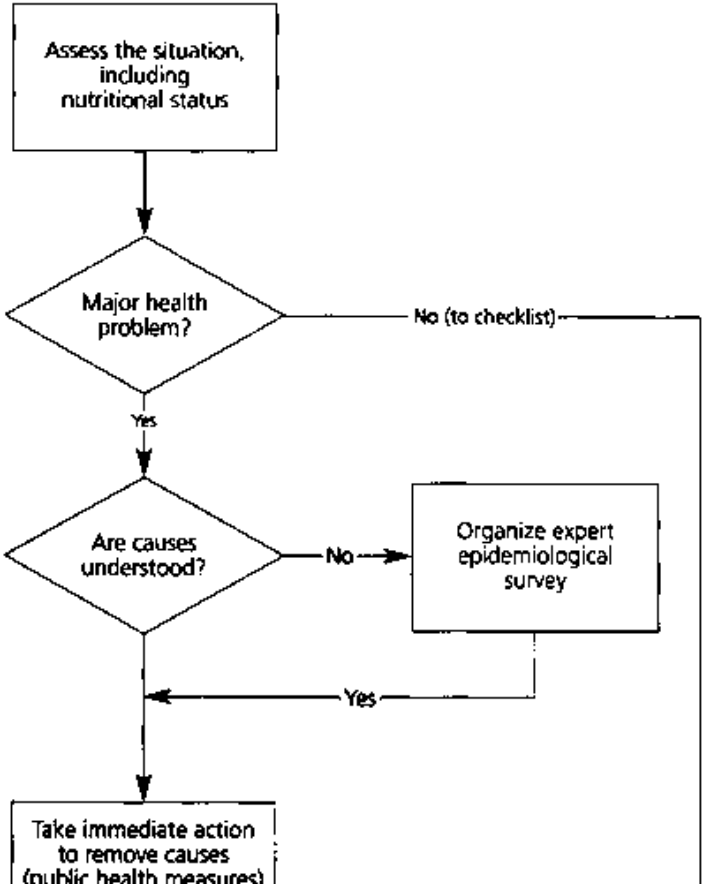
v. Population estimation and registration (see chapter 11 on population estimation and registration);

vi. Mass health and nutrition screening on arrival. This should focus on: (i) nutrition screening through visual inspection and measurement of the Mid Upper Arm Circumference ("MUAC"), (see chapter 15 on food and nutrition), (ii) checking for communicable diseases and vaccination coverage, and (iii) identifying patients in need of urgent referral. It is usually impractical to try to provide treatment in the screening line itself.

8. Figure 2 illustrates key management considerations for action in light of the initial assessment.

2 ***Health experts sometimes call this number "the***

denominator".



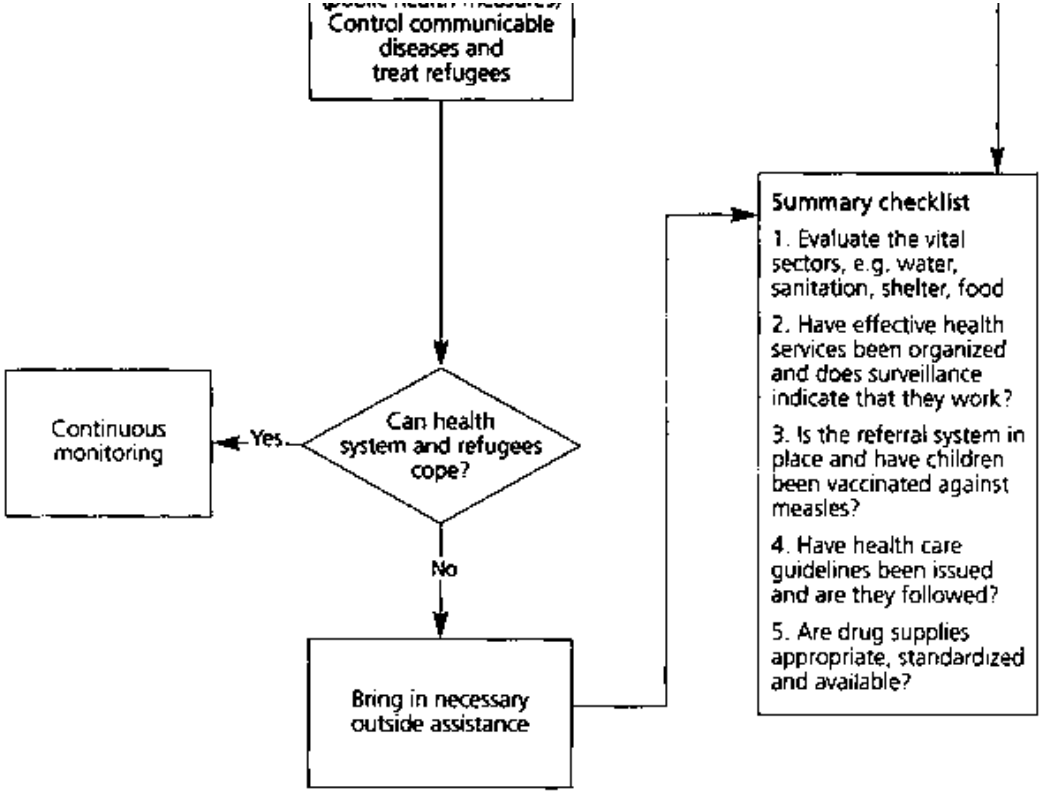


Figure 2 - Assessment and Response

Monitoring and Surveillance: The Health Information System

9. From the earliest stages of an emergency, a health information system should be put in place under the responsibility of the UNHCR Health Coordinator. The health information system should be simple, reliable, and action oriented, and its use will be essential to:

i. Quantify the health and nutritional status of the refugee population;

ii. Follow trends in health status and monitor the impact and outcomes of the relief programme;

iii. Detect epidemics;

iv. Evaluate programme effectiveness and service coverage;

v. Ensure that resources are targeted to the areas of greatest needs;

vi. Re-orient the programme as necessary.

10. Annex 1 sets out the tables and forms for collecting health-related information. However, to have a more comprehensive idea of the situation, information regarding water, food, sanitation, shelter

and availability of soap should also be collected and analyzed (see the relevant chapters on water, nutrition, sanitation, and physical planning).

11. The health information system should be kept simple. The information to be collected should be adapted to suit the collectors' qualifications. Overly detailed or complex reporting requirements will result in non-compliance. In addition, only data that can and will be acted on should be collected. Communication and exchange of views among all the actors in the health information system are essential to secure the functioning of the system.

Only simple arrangements are effective in emergencies.

12. Health information in the initial stages of an emergency should concentrate on:

i. Demography (see chapter 11 on registration, also paragraph 4 above, and table 1 of Annex 1);

ii. Mortality and its causes (see tables 2.1 and 2.2 of Annex 1 and paragraph 14 below);

iii. Nutritional status (see Annexes 4 and 5 of chapter 15 on food and nutrition);

iv. Morbidity (see below, and table 3.1 of Annex 1).

13. Only when the situation stabilizes can the system be made more comprehensive. Information on mortality and morbidity should be collected as follows:

Mortality

14. Each health facility should keep a log of all patient deaths with cause of death and relevant demographic information. This information should be summarized in tables 2.1 and 2.2 of Annex 1, reported centrally and consolidated with other data. Because many deaths occur outside the health-care system, a community-based mortality surveillance system should also be established. Such a system requires identifying sites which people are using as cemeteries, employing grave watchers on a 24 hours basis, routinely issuing burial shrouds, and using community informants. Deaths that occur outside hospitals with unknown causes should be validated through verbal autopsy by health workers specifically

trained for this task.

Morbidity

15. Each health facility providing out-patient services (including clinics for under five's and selective feeding programmes) should keep daily records. These records should be in the form of a log book or tally sheets at least, and should at least record the patient's name, age, sex, clinical and laboratory diagnosis and treatment. This information should be summarized in the forms set out as tables 3.1. in Annex 1 and reported centrally.

16. Diseases recorded in the health information system must have a case definition (i.e. a standard description) which will guide health workers in their diagnosis and ensure the consistency and validity of data. Where possible, case definitions that rely on clinical signs and symptoms (e.g. malaria) should be checked against a laboratory standard test (e.g. blood test for malaria).

17. In addition, the patient should be issued a health record card (or "Road to Health" card) on which the date, diagnosis, and treatment are recorded. Every contact a patient has with the health-care

system, whether for curative or preventive services, should be noted on the health record card retained by the patient.

18. The health information system should be periodically assessed to determine its accuracy, completeness, simplicity, flexibility, and timeliness. The way programme planners and key decision-makers use the information should also be assessed. The system should evolve as the need for information changes.

19. Camp and centrally controlled monitoring of health and nutritional status is essential if problems are to be identified in time to allow preventive and/or corrective actions to be taken and to adjust resource allocation. The refugees' health status should improve as public health services start to function adequately and the refugees adjust to their new environment.

20. However, a vigilant surveillance system must be maintained. Seasonal changes will affect health (for example temperature changes, and especially the rainy season) so seasonal variations in the incidence of disease will remain. The UNHCR Health Coordinator and her/his counterparts in the government and other partners will be responsible for the quality of this surveillance, the data required,

who will interpret it and how to ensure action on the results and feed-back to all actors.

Mortality

21. The most important and specific indicators of the overall status of the refugee population are the Crude Mortality Rate (CMR), for the whole population and Under-5 Mortality Rate (U-5MR) for children under five years of age. These indicators are of crucial importance to managers of the operation and are also of great interest to the media, donors and relief agencies. A priority for the health surveillance system is to produce reliable information on death rates.

22. During the emergency phase, mortality rates should be expressed as deaths/10,000 persons/day so that sudden changes can be detected.

Crude Mortality Rate is

deaths/10,000/day.

This is calculated as follows:

$$\frac{\text{Number of deaths x 10,000}}{\text{Number of days x total population}}$$

23. The objective of the overall assistance programme in the emergency phase should be to achieve CMR of <1/10,000/day and U-5MR of <2/10,000/day as soon as possible. These rates still represent approximately twice the "normal" CMR and U-5MR for non-displaced populations in most developing nations and should not signal a relaxation of efforts.

24. Age and sex-specific mortality rates have to be collected systematically and may indicate the need for targeted interventions. Table 1 below shows some benchmarks against which the daily Crude Mortality Rate (CMR) can be compared. Under-5 Mortality Rate benchmarks are usually twice the CMR.

Table 1 - Crude Mortality Rate Benchmarks

Average rate in most developing countries	**0.5 deaths/10,000/day**
Relief programme:	**<1.0**

under control	**deaths/10,000/day**
Relief programme: very serious situation	**>1.0 deaths/10,000/day**
Emergency: out of control	**>2.0 deaths/10,000/day**
Major catastrophe	**>5.0 deaths/10,000/day**

Morbidity (incidence and types of disease)

25. Knowing the major causes of illness and the groups at greatest risk helps efficient planning of intervention strategies and the most effective use of resources. Morbidity incidence is the number of new cases of a given disease among the population over a certain period of time, usually expressed per 1,000. It is more useful to follow this than to keep a simple tally of cases, as trends can be followed over time, or compared with other situations. Morbidity incidence should be recorded as set out in Tables 3.1 and 3.2 in Annex 1.

Main Health Programmes

- **The main causes of death and diseases in emergency situations are measles, diarrhoeas (including cholera), acute respiratory infections, malnutrition and malaria (where prevalent). Priority should be placed on programmes to reduce the negative impact of these diseases;**

- **Other causes of morbidity include tuberculosis, meningitis, vector-borne diseases, sexually transmitted diseases including HIV/AIDS, pregnancy and obstetric[3] complications, and childhood vaccine-preventable diseases;**

- **The emotional stress of displacement, often compounded by harassment, violence and grief suffered by the refugees will combine to deplete their physical and emotional reserves and reduce their natural resistance to diseases;**

- **Experience underlines the importance of meeting the reproductive health needs of refugees, and most particularly of women and adolescents;**

- **Early emphasis should be placed on correcting environmental factors which adversely affect health.**

3 ***Obstetrics: the branch of medicine concerned with childbirth and the treatment of women before and after childbirth.***

Curative care

26. The peak of curative medical care is at the early stage, when refugees are most vulnerable to their new environment with the health hazards it poses and before it has been possible to achieve any major public health improvements. Even though curative care alone will not meet the objective of reducing excess loss of lives, it will create confidence among the refugees towards the health services.

27. Appropriate diagnosis and treatment protocols of major diseases must be defined in accordance with national protocols, if they are suitable to the refugee context. There may be some exceptions to this rule, but implementation of refugee specific protocols should always be previously agreed upon with national authorities.

28. Remember to take into account deaths occurring outside the

health care system. A commonly documented error, committed by even excellent clinicians who have become absorbed in a health facility, is to fail to notice that cemeteries are being filled by refugees dying in their shelters, without having been identified or referred to receive appropriate curative services.

Immunization

29. Measles has been documented as being responsible for excess loss of lives, particularly but not exclusively among children under five years of age.

Immunization against measles for young children is the only essential immunization in the early stages of an emergency.

UNHCR advocates the immunization of children from 6 months up to 12 or even 15 years (rather than the more usual 5 years) because of the increased risks from the living conditions in refugee emergencies.

30. The decision as to whether or not to undertake a measles vaccination campaign at the onset of an emergency should be the

responsibility of an expert. The campaign should ideally be associated with, but not delayed by, distribution of Vitamin A. The decision will be based on the vaccination coverage reported in the country and area of origin and its reliability, and whether there has been a recent epidemic or vaccination campaign. If there is a need for a measles vaccination campaign, it should not be delayed until other vaccines are available, and it should have appropriate mechanisms to ensure new arrivals are vaccinated. The provision of vaccines should be discussed with UNICEF (see the MOU between UNICEF and UNHCR, Appendix 3).

31. There are strong reasons, both medical and organizational, not to have a mass immunization programme with all vaccines. The most common causes of disease and death in the emergency phase cannot be cured or prevented by immunizations (except measles). Mass immunization programmes require a large number of workers, and vaccines need careful handling and controlled, refrigerated conditions. Therefore undertaking such a campaign may represent a misuse of time and resources in an emergency.

32. As soon as the emergency has stabilized there should be a complete Expanded Programme of Immunization (EPI), which

should form an integral part of the ongoing long-term health programme. A standard EPI includes diphtheria, pertusis and tetanus toxoid (DPT), oral polio (OPV), and BCG (Bacille Calmette-Guerin) vaccines as well as measles. However, there should not be a vaccination campaign against any of these (apart from measles), nor should there be a complete EPI, unless the following criteria are met: the population is expected to remain stable for at least 3 months; the operational capacity to administer vaccine is adequate, and the programme can be integrated into the national immunization programme within a reasonable length of time (see the MOU between UNICEF and UNHCR, Appendix 3).

33. It is essential that adequate immunization records be kept. At the very minimum, personal immunization (or "Road to Health") cards should be issued. In addition, an independent central register of all immunizations is desirable, to enable analysis of vaccination coverage.

Communicable Disease Control

- **Emergency conditions, particularly overcrowding, poor sanitation etc. will facilitate the spread of communicable**

diseases;

- **The aim is to prevent, detect, control and treat diseases;**

- **Refugees are at greatest risk if they are exposed to a disease against which they have not acquired immunity (e.g. measles, malaria etc.);**

- **Communicable disease outbreaks require an immediate on-the-spot expert investigation and close coordination of the response with the national authorities, WHO and partners as appropriate.**

34. The main causes of death and morbidity among refugees in emergencies are:

i. Measles,

ii. Diarrhoeal diseases,

iii. Acute respiratory infections,

iv. Malaria (where prevalent).

Moreover, the interaction between malnutrition and infection, particularly among young children, contributes to increased rates of mortality.

Other communicable diseases - meningococcal meningitis[4], tuberculosis, sexually transmitted diseases (STDs), hepatitis, typhoid fever, typhus and relapsing fever - have also been observed among refugee populations. However, the contribution of these illnesses to the overall burden of disease among refugees has been relatively small.

[4] See World Health Organization. Control of Epidemic Meningococcal Disease: WHO Practical Guidelines, 1995.

Diarrhoeal Diseases

35. Diarrhoeal diseases represent a major public health problem and acute epidemics of shigellosis (causing bloody diarrhoea dysentery) and cholera, have become common in refugee emergencies and have resulted in excess loss of lives. In risk areas, it is essential to set up appropriate preventive measures as soon as possible. These measures include:

i. Adequate supply of potable water and an appropriate sanitation system;

ii. Provision of soap and education on personal hygiene and water management;

iii. Promotion of food safety and breast-feeding;

iv. Reinforced home visiting and early case detection;

v. Identification of an area ("cholera management unit") to manage patients with cholera in case an epidemic occurs.

36. It is not possible to predict how a cholera outbreak will develop. If proper preventive measures are taken less than 1% of the population should be affected. Usually however, 1 to 3% are affected but in extreme cases it can be more-even as much as 10%.

37. To be prepared to respond quickly to an outbreak, the above preventive measures should be accompanied by the establishment of appropriate protocols on case management. These protocols should be based on National or WHO protocols and should be founded on rehydration therapy, continued feeding and appropriate

antibiotics (especially for shigellosis[5]). In addition, there should be a reliable surveillance system for early detection of cholera cases, to follow trends and determine the effectiveness of specific interventions.

38. A significant amount of material, financial and experienced human resources are likely to be needed to respond to a cholera outbreak and reduce the case fatality rate.

39. To facilitate an immediate response, cholera kits can be obtained from the Supply and Transport Section at Headquarters at short notice. Each kit can cover the overall management of some 500 cases. No efficient vaccine to prevent cholera outbreaks is as yet available.

[5] See World Health Organization. Guidelines for the control of Epidemics due to Shigella Dysenteriae Type 1, 1995.

Measles

40. WHO has classified refugees and displaced populations, especially in camps, as groups at highest risk for measles outbreaks.

Indeed, this disease has been devastating in many refugee situations. Measles vaccination coverage should be as close as possible to 100%, if not, measures should be taken immediately to control the situation (see the MOU between UNICEF and UNHCR, Appendix 3, and paragraphs on immunization above).

Malaria

41. Malaria can also pose major problems. Its appropriate management and control is also a matter for experts and is based on the following:

i. Early case detection and appropriate treatment. It may be necessary to study drug resistance;

ii. Preventative treatment (chemoprophylaxis) particularly for pregnant women;

iii. Elimination of vector breeding sites;

iv. Vector control, including the distribution of insecticide-impregnated mosquito nets and periodic spraying, as indicated.

42. Chemical control measures such as spraying, or impregnated mosquito nets, may seem quite attractive but should only be taken upon expert advice as several factors must be considered such as: the habits of the refugees, seasonal variations, mosquito biting habits, transmission levels, national protocols about chemicals and registered lists of chemicals, and cost. Please see chapter 17 on environmental sanitation for guidance on vector control.

Acute Respiratory Infections

43. Pneumonia is the acute respiratory infection that has been documented as a cause for excess mortality, most particularly in the under five population. It is therefore essential to make sure that refugees are provided with adequate shelter and blankets as soon as possible. Health staff must be appropriately trained to diagnose and treat respiratory infections.

44. The more common diseases are outlined in table 2 below which illustrates the environmental impact on disease and indicates those improvements in living conditions which will bear directly on the health of the refugees.

Table 2 - Common diseases

Disease	Major contributing factors	Preventive measures
Diarrhoeal diseases	Overcrowding, contamination of water and food Lack of hygiene	• adequate living space • public health education • distribution of soap • good personal and food hygiene • safe water supply and sanitation
Measles	Overcrowding Low vaccination coverage	• minimum living space standards as defined in chapter 12 on site planning • immunization of children with distribution of vitamin A. Immunization from 6 months up to 12-15 years (rather than the more usual 5 years) is recommended because of the increased risks from living conditions
Acute	Poor housing	• minimum living space standards

respiratory infections	Lack of blankets and clothing Smoke in living area	and • proper shelter, adequate clothing, sufficient blankets
Malaria	New environment with a strain to which the refugees are not immune Stagnant water which becomes a breeding area for mosquitoes	• destroying mosquito breeding places, larvae and adult mosquitoes by spraying. However the success of vector control is dependent on particular mosquito habits and local experts must be consulted • provision of mosquito nets • drug prophylaxis (e.g. pregnant women according to national protocols)
Meningococcal meningitis	Overcrowding in areas where disease is endemic (often has local	• minimum living space standards • immunization only after expert advice when surveys suggest necessity

	seasonal pattern)	
Tuberculosis	Overcrowding Malnutrition High HIV prevalence	• minimum living space standards (but where it is en- demic it will remain a problem) • immunization
Typhoid	Overcrowding Poor personal hygiene Contaminated water supply Inadequate sanitation	• minimum living space standards • safe water, proper sanitation • good personal, food and public hygiene and public health education WHO does not recommend vaccination as it offers only low, short-term individual protection and little or no pro- tection against the spread of the disease
Worms especially hookworms	Overcrowding Poor sanitation	• minimum living space standards • proper sanitation, good personal hygiene • wearing shoes
Scabies[6]	Overcrowding	• minimum living space standards

	Poor personal hygiene	• enough water and soap for washing
Xerophthalmia Vitamin A deficiency	Inadequate diet Following acute prolonged infections, measles and diarrhoea	• adequate dietary intake of vitamin A. If not available, provide vitamin A fortified food. If this is not possible, vitamin A supplements • immunization against measles. Systematic prophylaxis for children, every 4-6 months
Anaemia	Malaria, hookworm, poor absorption or insufficient intake of iron and folate	• prevention/treatment of contributory disease • correction of diet including food fortification
Tetanus	Injuries to unimmunized population Poor obstetrical practice causes neo-natal tetanus	• good first aid • immunization of pregnant women and subsequent general immunization within EPI • training of midwives and clean ligatures, scissors,

		razors, etc.
Hepatitis	Lack of hygiene Contamination of food and water	• safe water supply • effective sanitation • safe blood transfusions
STD's/HIV	Loss of social organization Poor transfusion practices Lack of information	• test syphilis during pregnancy • test all blood before transfusion • ensure adherence to universal precautions • health • availability of condoms • treat partners

[6] Scabies: skin disease caused by burrowing mites

Reproductive Health[7]

[7] See: United Nations High Commissioner for Refugees. An Inter-agency Field Manual on Reproductive Health in Refugee Situations, 1995.
UNFPA have developed a set of reproductive health kits

which can be used as part of a programme to deal with reproductive health problems and the Health and Nutrition Unit or the Supplies and Transport Section at Headquarters should be contacted for details.

45. Reproductive health care in refugee situations should be provided by adequately trained and supervised staff and should be guided by the following principle:

Reproductive health care should be available in all Situations and be based on refugee, particularly women's, needs and expressed demands. The various religious, ethical values and cultural backgrounds of the refugees should be respected, in conformity with universally recognized international human rights.

46. The provision of quality reproductive health services requires a collaborative effort by a number of sectors (health, community services, protection, education) and organizations, which should provide reproductive health services based on their mandates.

47. While resources should not be diverted from addressing the problems of the major killers (measles, diarrhoeal diseases, acute

respiratory infections and malaria), there are some aspects of reproductive health which must also be dealt with in the initial phase of an emergency. The major objectives of reproductive health care in an emergency are to:

i. Prevent and manage the consequences of sexual violence;

ii. Decrease HIV transmission by respecting universal precautions[8] and guaranteeing the availability of free condoms;

iii. Prevent excess neonatal and maternal morbidity and mortality by providing clean home delivery kits, ensuring clean and safe deliveries at health facilities and managing emergency obstetric complications by establishing a referral system;

iv. Plan for provision of comprehensive reproductive health services, integrated into Primary Health Care, as soon as possible;

v. Identify a person responsible to coordinate reproductive

health activities under the responsibility of the overall health coordinator.

48. As soon as feasible, when the situation has stabilized, comprehensive reproductive health services based on the needs of refugees should be put in place. These services should be integrated within the primary health care system and should address the following aspects:

8 "Universal precautions" means procedures and practices by health workers to limit transmission of disease.

Safe Motherhood

49. This should cover antenatal care, delivery care and postnatal care. All pregnant women should receive antenatal care services during pregnancy. All deliveries should be accompanied by a trained health care provider. A referral system to manage obstetric emergencies should be put in place. Within the first 4-6 weeks, mothers and their new babies should visit the health services and receive nutritional supplements, counselling on child spacing, and education about breast-feeding and infant care.

Prevention and Response to Sexual Violence

Please refer to chapter 10 on community services.

***Sexually Transmitted Diseases including* HIV/AIDS[9]**

50. Experience shows that HIV spreads fastest in conditions of poverty and social instability - conditions which typify refugee emergencies. The priority should be on preventing HIV transmission: ensure there is respect for universal precautions and work closely with the community to promote HIV prevention strategies including condom education and distribution. Where blood transfusions are provided, ensure they are safe. Treatment of sexually transmitted diseases should be a routine part of the health services and should include appropriate follow up of partners.

Mandatory HIV testing in refugee circumstances, with the single exception of testing blood for transfusion, is not justified, and WHO has determined that, as a matter of policy, such testing should not be pursued.

[9] ***United Nations High Commissioner for Refugees, UNAIDS and WHO. Guidelines for HIV Interventions in Emergency Settings, 1996.***

Family Planning

51. Family planning services should be initiated as soon as feasible. Ensure that the refugees are informed and understand their free choice in the matter.

Other Reproductive Health Concerns

52. Women who have complications such as spontaneous or unsafe abortion should be cared for by the referral system.

53. Programmes to eradicate harmful traditional practices including female genital mutilation should be implemented once the situation has stabilized. It is crucial to work closely with the refugee community in tackling this issue[10]. Culturally appropriate sanitary supplies should be distributed to women as soon as possible. Inadequate sanitary protection may prevent women from collecting material assistance.

[10] See IOM/FOM (83/97: 90/97), Policies on Harmful Traditional Practices, UNHCR, 1997.

Reproductive Health and Young People

54. Health workers should pay particular attention to meeting the reproductive health needs of young people as they may be at greater risk and have more limited access to appropriate services.

55. It is important to ensure that sufficient female health workers are trained in reproductive health in order to provide culturally appropriate health services including education in the community and at the health facilities. At least some of these health workers should be recruited from among the refugee community.

Tuberculosis control[11]

56. The prevalence of Tuberculosis (TB) has significantly increased in recent years worldwide, but a TB control programme is not a priority in the early stages of an emergency when mortality and malnutrition rates are very high.

57. Expert advice and involvement of the National TB control programme (often supported by WHO) are needed before starting a TB programme. Bad planning and poor implementation could result in more harm than good.

58. To increase the chances of success, TB programmes should only be started in stable situations, when Directly Observed Therapy[12] can be implemented, when funds, drugs, reliable laboratory services and trained staff are available.

[11] ***World Health Organization and United Nations High Commissioner for Refugees. Guidelines for Tuberculosis Control in Refugees and Displaced Populations, 1996.***

[12] ***Directly Observed Therapy is where the health worker is able to observe the treatment including that the medication is taken correctly.***

Mental Health[13]

59. The psychosocial needs of refugees have often been neglected or

even forgotten. However, health services should aim to promote the highest standard of both physical and mental health. It is easy to recognize that there is a heavy burden placed upon refugees from, for example, physical violence, grief and bereavement, fear and stress, an uncertain future and a sense of powerlessness.

60. Experience in identifying and dealing with the psychosocial problems of refugees (including Post Traumatic Stress Disorders) is limited, even so the following general guidance can be given. Any programme dealing with mental health must be community-based with the refugees themselves playing a major role. The programme must be based on a solid knowledge and understanding of the refugees' cultural background and integrated with the other services provided to refugees, and, from the outset, its long term sustainability must be ensured.

13 ***World Health Organization and United Nations High Commissioner for Refugees. Manual of Mental Health of Refugees, 1996.***

Capacity building

Health Education

61. The importance of health education is widely recognized. However, there are significant difficulties in persuading those most at risk to change long-established habits.

In the emergency phase, the priority topics should be those directly related to the immediate public health problems.

62. Health education should therefore focus on the disposal of human excreta and refuse, water management and personal hygiene. Many governments and organizations produce simple health education materials that may be useful. Trained refugee teachers and respected elders are likely to be more effective than outsiders in communicating the basic principles and practices of health to their own people. At a later stage, information, education and communication should also be a major tool for the prevention and reduction of sexually transmitted diseases including HIV.

Training

63. As suggested by the definition of "emergency", extraordinary

mobilization of resources, including human, will be needed to cope with the situation. Annex 2 sets out a suggested structure of the health service and numbers and qualifications of staff needed. Full staff support including community health workers, and health workers, doctors and nurses at health centres, health posts and clinics, with the necessary qualifications and experience, will not be instantly available.

Training will therefore be a cornerstone of an effective health and relief programme.

64. Training activities must be well targeted to meet the objective of the programme, and this is dependent on definition of roles and responsibilities among various levels of health care and identifying the necessary qualifications. Training must be part of the main health programme.

Medical supplies

65. There must be a policy on essential drugs. The aim of the policy will be to ensure a supply of safe, effective and affordable drugs to meet priority needs of the refugees. The Health and Community

Development Section and the Supply and Transport Section at Headquarters issued an essential drugs list which is used to order drugs for UNHCR operations.

66. In order to foster the appropriate use of drugs, standard treatment protocols should be established. This will help rationalize prescription habits among the various partners and organize training activities. Protocols are usually based on national standards.

67. In the early stage of an emergency, it is often useful to resort to pre-packaged emergency health kits. The best known is the New Emergency Health Kit which has been developed through collaboration among many agencies (WHO, UNICEF, MSF, ICRC, UNHCR and others). The contents of the kit are intended to cover the needs of 10,000 people for 3 months during an emergency. The kit can be obtained at short notice through the Supply and Transport Section at Headquarters and can be used at the community level of health care and at health centres. The emergency health kit should only be used in the early stage of an emergency and not relied on for longer term needs.

68. As soon as possible, arrangements should be made for a regular supply of appropriate quantities of essential drugs from the UNHCR essential drugs list. The requests should be based on epidemiological surveillance and disease patterns. The Supply and Transport Section can also provide support for the purchase of drugs and their transport to the field.

69. It is of utmost importance to establish a system to monitor drug consumption. In major operations, a full time pharmacist may be needed to work with UNHCR. Over-prescription of medicines by health workers following pressure by refugees is not uncommon in refugee emergencies.

70. Donations of unsolicited drugs are often a problem during emergencies. A number of agencies (UNDP, UNHCR UNICEF, WHO, MSF and others) have jointly developed guidelines on drug donations[14] that provide donors and users with a list of drugs and supplies which can be sent to emergency situations. This is to help ensure that personnel in the field do not waste time sorting out "useless" donations (small quantities of mixed drugs, free samples, expired medicines, inappropriate vaccines, and drugs identified only by brand names or in an unfamiliar language). UNHCR's policy is

that overseas medical supplies should be sent only in response to a specific request or after expert clearance. The WHO Representative, local diplomatic missions and all others concerned should be briefed accordingly.

14 WHO, Guidelines for Drug Donations, May 1996.

Laboratory Services

71. Refugees are often remote from laboratory facilities. However, very simple laboratory services at the site level are usually adequate.

72. Reference laboratory services are required for epidemic management and control, (e.g., meningitis, shigellosis, cholera, hemoragic and relapsing fevers, high malarial endemicity, hepatitis etc.) to confirm/clarify diagnosis and perform antibiotic sensitivity. This should be discussed with the national authorities and WHO. Where blood transfusions are provided, laboratory services will be absolutely essential to test all blood for HIV before transfusion.

Organization of Refugee Health Care

- **There is no single model for organizing health services in refugee situations, but it is usually structured on three levels: community health posts and clinics, health centres, and referral hospitals;**

- **It is of the utmost importance to ensure good communication and feed-back between the various levels of health care;**

- **Priority should be given to using host country health facilities as referral centres and support should be agreed upon and provided to the facilities (see MOU between WHO and UNHCR, Appendix 3).**

Introduction

73. The three levels of health care are summarized in Annex 2. The first level is at the community level with health posts, clinics and outreach services. At the second level is a health centre with basic facilities for out and in-patients departments, dressing and injections, a pharmacy, and a basic laboratory. At the third level is a referral hospital for emergency obstetric care and surgery,

management of very complicated cases, performance of laboratory tests etc. Referral hospitals are usually national facilities at the district, regional or national level.

74. The refugees must have easy access to appropriate treatment. If the local national health facilities cannot be strengthened to meet the needs, alternative arrangements will be required. Unless treatment is provided at the right level, the hospitals or health centres will be swamped by refugees demanding treatment for simple conditions. Thus, a community-based health service is required that both identifies those in need of health care and ensures that this is provided at the appropriate level. Close coordination with community services is essential.

Community Level Health Care

75. Whether refugees are in camps or spontaneously settled among local villages, community level services are essential.

Community-level health care must be the mainstay of health services from the very beginning of the emergency.

76. This means basic health care is to be delivered at the community level in a decentralized manner with two components: (i) a peripheral clinic/health post and (ii) outreach services delivered by Community Health Workers (CHWs) and Traditional Birth Attendants (TBAs). TBAs might be recruited among traditional midwives in the community. In order to be effective, CHWs and TBAs must be trained, supported and closely supervised. The role of CHWs and TBAs includes:

i. home visiting, identification and referral of sick people and malnourished children;

ii. identification of pregnant women and referral for antenatal, delivery and post natal care;

iii. basic health education;

iv. data-gathering for the health information system (deaths and their causes and the incidence of major communicable diseases);

v. responding to the needs of refugees who have been

sexually assaulted.

As a guide, 1 CHW per 1,000 population and 1 TBA per 3,000 population should be the goal. Ideally, 50% of those trained should be women as same sex care is often preferred.

77. The clinic or health post will cater for the needs of approximately 5,000 refugees in crowded conditions but otherwise in reasonably good health. This should be a simple building with facilities for consultation, basic curative care (drugs from the New Emergency Health Kit), oral rehydration therapy, clinical procedures such as dressings (but not injections because of the risks of HIV transmission), a small lock-up pharmacy, simple equipment and sterilization facilities (electricity may not be available), data collection (log books to record patients and activities). Water and sanitation are essential in all health facilities.

The Health Centre

78. In support of the clinics/health posts, there should be a health centre for each refugee settlement (approximately 10,000 to 20,000 people). Very large settlements may require more than one. The

health centre should be able to handle all but the most complicated medical, obstetric and surgical cases. More facilities should be available than at the clinics, including basic laboratory services, a central pharmacy and some beds for in-patients, in the range of one per 2,000 to 5,000 refugees. The health centre should collect and consolidate health information from the various clinics and health posts. The health centre should also organize the main health programmes (EPI, reproductive health, tuberculosis) and the supervision and training of staff (at both first and second level).

79. An indication of the number and qualifications of health staff required is given in Annex 2.

Referral Services

80. The health centre must be able to refer patients to hospitals for treatment. Referral hospitals should provide emergency obstetric and surgical care, treatment for severe diseases, laboratory and x-ray services as well as supply and support for nationally controlled programmes (TB, leprosy, HIV/AIDS).

81. Only a small proportion of patients will require referral services.

These services will usually be organized in national health facilities at the district, regional or national level, and ideally, referral should be made to the nearest national hospital. This has obvious advantages, not least the fact that the infrastructure already exists.

The programme should compensate the national referral structures for services provided to refugees.

82. The hospital(s) should be expanded or supported as necessary, for example with tents and additional health personnel as well as some financial and/or material support (drugs, supplies, food). Care must be taken not to swamp the local hospital. Close and direct coordination with the district or regional medical officer is essential.

83. An agreement should be signed between the parties, under the aegis of the Ministry of Health, which clarifies the conditions of assistance including cost per patient per treatment and in kind support (food and drugs). A written agreement is essential to avoid controversies.

84. It is only in certain circumstances that special refugee hospitals will need to be established, but generally this should be avoided.

They should only be established when the needs cannot be met by existing or strengthened national hospitals, for example when refugee numbers are very large (much larger than the local population), when the nearest national hospitals are too far away, or for security reasons. The Supply and Transport Section and the Health and Community Development Section should be consulted prior to establishing or acquiring refugee specific field hospitals.

85. Whatever arrangements are made for hospital treatment and referral, there must be suitable transport to and from the referral hospitals. Facilities at the hospital must also provide for the needs of relatives and allow parents to be with young children.

86. Arrangements for referral must be such that only those patients specifically referred from the health centres are attended, with no refugees presenting themselves directly to the hospital.

87. Refugee emergencies are not usually characterized by large numbers of injured persons. However, when this is the case, there may be an initial requirement for the rapid deployment of a surgical unit which is normally quickly available. Pre-packaged (expensive) surgical kits can be obtained through Supply and Transport Section

at short notice.

88. The UNHCR Health Coordinator should ensure that there is a system to record referrals and subsequent treatment and follow-up of the patients.

Human Resources and Coordination

- **The health services must be developed with and not just for the refugees and in accordance with their needs and demands;**

- **The early appointment of a suitably experienced health coordinator to UNHCR's staff has proved essential. A reproductive health focal point should also be identified as early as possible;**

- **While the use and development of local expertise is preferable, it is often necessary to mobilize outside assistance in an emergency;**

- **The issue of staff salary and incentives should be discussed and solved from the outset;**

- **The Ministry of Health at all levels must be as closely involved as possible.**

The Refugees

89. The refugees must be given responsibility for their own health. Outside health workers must understand the refugees' own concepts of health and disease. From the beginning, health services should be developed and operated with, rather than for, the refugees. If not, the services will be less effective, may be distrusted and poorly used, and are unlikely to be sustainable.

90. Preventive services should always be free. In most situations, other health services are also offered free of charge. While this may well be justified, it should not be considered as a policy as it is often based on paternalistic attitudes. The issue of cost-recovery or payment for services should be regularly analyzed and most particularly when refugees are integrated within the local population (which may have to pay for services) or when refugees are benefiting from local integration and sources of income.

Staffing Needs

91. As a general principle, the order of preference for selecting health personnel, in cooperation with the national authorities, is:

i. Refugees;

ii. Experienced nationals or residents;

iii. Outsiders.

Most emergencies will require some combination of these sources.

92. Strong emphasis should be placed on the training, supervision and upgrading of medical skills of selected refugees, particularly in their former roles within the community. When selecting refugees, care must be taken to include women who may not come forward as readily as men. Full account should be taken of the experience of the traditional healers and midwives. Refugees may seek traditional treatments and experience has demonstrated the advantages of encouraging traditional methods of health care which complement other organized health services.

93. An important consideration may be the government's attitude to foreign medical personnel, including, for example, recognized

qualifications and permission to practice medicine.

94. The issue of staff salary and incentives should be addressed at the onset. All agencies and organizations involved in the refugee programme should adhere to the same standards. The determination of salaries and incentives should be based on the national (or country of origin) standards and due account should be taken of assistance (free food, water, shelter etc.) received by refugees. In principle, all staff performing work on a daily basis, with clearly identified responsibilities and strict working hours, should receive a salary or an incentive.

95. Special attention should be given to the recruitment of local staff. The salary or incentive offered to them should be in line with national standards. Very frequently, refugee emergencies attract national personnel (commonly referred to as "brain drain") at the expense of national services which can create serious tension.

The National Health Authorities

96. Early involvement of the host government's central, provincial, and district health services is essential. To the extent possible,

services provided to refugees should be integrated with national services. It will be particularly important to ensure integration and compatibility with certain treatment protocols, immunization programmes, communicable disease control and surveillance practices. Promoting good health for the refugees is clearly in the interest of the local population. In addition, supporting existing structures will help ensure that health services for refugees are sustainable and are at a standard equivalent to that of the host country nationals.

UNHCR Health Coordinator

97. In major emergencies, (e.g. when there is a prevalence of epidemics, many partners, large numbers involved) UNHCR must ensure that a Refugee Health Coordinator is appointed. The Health Coordinator should be a key member of the UNHCR programme staff. The person should take the lead role in this sector, or play a key supporting role to the national institution which takes the lead role.

98. The Health Coordinator's primary responsibility will be to ensure that the level and quality of services provided adhere to nationally

and internationally accepted standards and medical ethics.

Other main tasks and duties include:

i. Participating and facilitating the consultation process among all concerned parties in order to carry out an appropriate problem, needs and resources assessment;

ii. Participating in, and facilitating the creation of, health and nutrition committees with the Ministry of Health, other UN agencies and non-governmental organizations (NGOs) where coordination will take place to jointly identify priority activities, and to plan for their implementation by defining needed human, material and financial resources;

iii. Facilitating cooperation among all partners to ensure an appropriate implementation and monitoring of the programme as agreed upon at the coordination committee meetings;

iv. Setting up and participating in the implementation of an effective Health Information System;

v. Ensuring that joint protocols for medical treatment, staffing and training are established and that implementing partners adhere to them;

vi. Ensuring the identification of a qualified and experienced person to coordinate reproductive health activities at the start of the relief programme;

vii. Facilitating inter-sectoral coordination;

viii. Consolidate the reporting about the refugees' health and nutritional status;

ix. Assisting in setting up a medical evacuation plan for UNHCR staff.

99. Experience shows that it is in the first days and weeks of an emergency that excess mortality is recorded.

It is therefore vital that a UNHCR Health Coordinator is fielded immediately, at the very start of the emergency.

100. The quickest and most practical way to deploy a Health Coordinator is usually to send UNHCR staff or consultants. Headquarters should be consulted immediately on this. At a later stage, posts can be created or staff seconded from other UN agencies (UNICEF or WHO), or from the Ministry of Health.

Other Specialized Staff

101. The need for specialized staff should be carefully assessed by the UNHCR Health Coordinator or by the Health and Community Development Section at Headquarters. Such specialists include epidemiologists, specialists in public, reproductive and mental health, nutrition, tropical medicine, paediatrics, midwifery, pharmacy etc.

Experienced personnel with the right personality are more important than highly trained Specialists, whose skills are often inappropriate.

102. Familiarity with the local culture, patterns of disease and the public health services and previous experience in emergencies are as important as an advanced knowledge of medicine and medical

techniques.

Role of the UN and Specialized Agencies

103. *WHO.* The World Health Organization works directly with the Ministry of Health in almost every country in the world. The response to the health needs of the refugees and surrounding local populations should be closely coordinated with WHO. Details of this collaboration are described in the WHO and UNHCR Memorandum of Understanding, Appendix 3.

104. *UNICEF.* Collaboration with UNICEF in emergencies will focus on supply of measles vaccines and delivery/midwifery kits, as well as on health education (see Memorandum of Understanding between UNICEF and UNHCR for more details, Appendix 3)

105. *UNFPA.* Collaboration with UNFPA focuses on reproductive health matters and demography and there is a Memorandum of Understanding between UNFPA and UNHCR which details this collaboration, Appendix 3.

106. *UNAIDS.* UNAIDS is an inter-agency mechanism created in

1995 to support national HIV/AIDS programmes. Refugee health services must be integrated in these national programmes.

107. Through a standby arrangement with UNHCR, the Centre for Disease Control and Prevention (CDC Atlanta, USA) can supply, at short notice, experts for rapid health and nutritional assessment, improvement of epidemic preparedness and response in emergencies and set up Health Information Systems. Deployments are usually limited from four to eight weeks and can be arranged upon request through the Health and Community Development Section at Headquarters.

Role of NGOs

108. Operational and implementing partners are essential collaborators for UNHCR. All collaborators in the emergency health programme must be brought together to form health sub-committees at the central and field level as appropriate. Initially, these committees may have to meet daily or at least weekly, usually under the chairpersonship of a representative of the Ministry of Health, supported by the UNHCR Health Coordinator. Ideally, members of the committee should have been identified at the

contingency planning stage.

109. Activities of the health sub-committee include: allocation of tasks, exchange and pooling of information on health activities and with other sectors (e.g. food, water, sanitation etc.), setting up jointly agreed protocols for medical procedures, staffing levels and training, and problem-solving in general.

110. In emergencies, urgent outside assistance in the health sector is almost invariably necessary. This is because the immediate and specialized attention needed represents a burden that existing local structures are not designed to bear. District health services will almost never have the needed reserve capacity in terms of staff at all levels, infrastructure, medical supplies and technical expertise. This capacity can be developed over time, with the support from the central government and other UN agencies.

111. NGOs (international, regional or national) must be chosen with care and this is usually done by the government of the country of asylum. However, it is also the responsibility of UNHCR to advise the government on which organizations have proven competence in emergencies. Some agencies have experience in long-term

situations but less in emergencies; others may be too narrow in focus, preferring to do purely curative work to the exclusion of public health, prevention, sanitation etc.

112. Small NGOs, especially those created in response to a specific situation, should first demonstrate appropriate competence before being engaged in the emergency phase.

The number of agencies involved should be kept to a minimum.

113. During the early stages of an emergency it is essential that the numbers of NGOs involved should be kept to the minimum necessary, and that those chosen should be professional, capable of deploying experienced personnel and with proven past experience in collaborating with both governments and UNHCR in the effective management of an emergency.

Organization of Response

114. A possible hierarchy of health services is outlined in Annex 2. It is based on a large-scale emergency involving a great number of health staff, both national and international. A smaller emergency

will require fewer levels of organization. Note that the numbers and qualification of staff suggested is no more than an indication. Actual needs will depend on the health problems, the degree of isolation of the area and so on.

115. Once the pattern of disease and overall needs have been determined, situation-specific guidelines on standard procedures for health workers should be prepared, based on national or internationally recognized standards. These should cover all aspects of the services, including such subjects as basic principles, how the services are to be organized, including any selective feeding programmes, standardized treatment protocols, drug lists and supply, vaccination and reporting. The guidelines should be prepared by the UNHCR Health Coordinator in consultation with all concerned, issued under the aegis of the Ministry of Health if possible, and reviewed periodically, for example by a health coordination sub-committee. At least part of the guidelines should be translated into the language of the community health workers.

All organizations providing health care to the refugees should be involved in the preparation and required to observe standard guidelines.

Key References

An Inter-agency Field Manual on Reproductive Health in Refugee Situations, 1995. **United Nations High Commissioner for Refugees, Geneva. To be updated in 1999.**

Essential Drugs Manual: Guidelines for the Use of Drugs in Refugee Settings and UNHCR List of Essential Drugs, Geneva, 1989.

Famine-affected, Refugee, and Displaced Populations: Recommendations for Public Health Issues, July 24, 1992/Vol.41/No. RR-13. **The Centers for Disease Control, (CDC).**

Guidelines for Tuberculosis Control in Refugees and Displaced Populations, 1996 **World Health Organization and United Nations High Commissioner for Refugees.**

Guidelines for HIV Interventions in Emergency Settings, **1996 United Nations High Commissioner for Refugees, UNAIDS and WHO, Geneva.**

Manual of Mental Health of Refugees, 1996 **World Health**

Organization and United Nations High Commissioner for Refugees.

Sexual Violence against Refugees, Guidelines on Prevention and Response, 1995 **United Nations High Commissioner for Refugees, Geneva.**

UNHCR, IOMIFOM (83/97; 90/97), Policies on Harmful Traditional Practices, 1997 **United Nations High Commissioner for Refugees, Geneva.**

Vector and Pest Control in Refugee Situations, April, 1997 **United Nations High Commissioner for Refugees, Geneva.**

Annexes

Annex 1 - Health Information System

In the early stages of an emergency it is essential to collect information on a weekly or monthly basis for the following tables:

Table Number	Table Description
1	Demographic information
2.1.A and B, 2.2	Crude Mortality Rate and Under five years old

2.1 A and B; 2.2	Crude Mortality Rate and Under five years old Mortality Rate Cause-specific-mortality
3.1	Morbidity Incidence
1. and 4.2 (set out in Annexes 4 2. and 5 of chapter 15 on nutrition)	1. Nutrition, Supplementary and Therapeutic Feeding Programmes
1. 5.2	1. Main causes of discharge/deaths in In-Patients Departments
1. 7.1	1. Deliveries: Birth (Total births and birth rate only)
1. 7.4	1. Cholera/Meningitis/Hepatitis/Micro-nutrients deficiencies

1.

Collection of the information required for the other tables should be

progressively introduced as the situation stabilizes.

In order to detect problems and to monitor the impact of any health programme, it is necessary to collect information over time so as to follow trends. The tables below are designed to allow tabulation of information on a weekly or monthly basis. Graphical presentation of the same information will make it easier to detect trends. The tables may need to be adjusted to reflect the needs of actual situations.

1. Demographic Information

Table 1 - Population

Camp/area Names	Male under 5 years	Female under 5 years	Male over 5 years	Female over 5 years	Total Population

Total					

Sources of demographic information: registration ❑ Estimate ❑ Government ❑ Other ❑

% of total population which is under 5 =

% of total population which is female =

Note: demographic information does not necessarily have to be reported in a table format. The denominator used for calculation of rates could differ from the official working figure and this should be clarified.

2. Mortality

2.1 Mortality rates

Mortality rates (segregated by age and sex) should be given per 10,000 per day

A. Crude Mortality Rate: CMR

Table 2.1 A

Camp/area Names	Male		Female		Total	
	Number of deaths	Death Rate	Number of deaths	Death Rate	Number of deaths	Death Rate
Total						

B. Under five years old mortality rates (U-5 MR)

Table 2.1 B

Camp/area Names	Male		Female		Total	
	Number	Death	Number of	Death	Number of	Death

	of deaths	Rate	deaths	Rate	deaths	Rate
Total						

Female / Male ratio:

A graph line (to show trends) for CMR and U-5 MR could be attached.

2.2 *Cause-specific mortality*

Tables 2.2 (2.2 A for total population and 2.2 B for under-five population).

	Male		**Female**		**Total**	
	Number	% of the	Number	% of the	Number	% of the

	Number of deaths	total number of deaths	Number of deaths	total number of deaths	Number of deaths	total number of deaths
Malaria						
Pneumonia						
Watery diarrhoea						
Bloody diarrhoea						
Measles						
Meningitis						
Cholera						
Maternal death (2.2 A only)						
Peri/neo natal						
Malnutrition						

Total		100%		100%		100%

From table 2.2 A and 2.2 B, pie charts could be attached to the report.

The list of diseases is provided as an indication.

Comments on mortality:

3. **Morbidity**

3.1 Incidence **(Number of new cases per 1,000 of the population for the period)**

Tables 3.1 (3.1A for total population and 3.1B for under-five population).

	Male	**Female**	**Total**
Malaria			
Pneumonia			
Watery diarrhoea			
Bloody diarrhoea			

Bloody diarrhoea			
Measles			
Meningitis			
STDs			

The list of diseases is provided as an indication.

3.2 Out-Patient Department (OPD) consultations

Table 3.2 Number of consultations per refugee per year.*

Camp Names	Male	Female	Total
Average			

*** from the total number of OPD consultations per camp, extrapolate to define the number of consultations per refugee**

per year. As an example: 10,000 consultations in one month in a camp of 30,000. 10,000 × 12 = 120,000 / 30,000 = 4 consultations/refugee/year.

Comments on morbidity:

4. Nutrition

4.1 *Supplementary Feeding Programme Monthly Report*

This table is contained in Annex 4 of chapter 15 on nutrition.

4.2 *Therapeutic Feeding Programme Monthly Report*

This table is contained in Annex 5 of the chapter 15 on nutrition.

4.3 *Food basket monitoring*

See chapter 15 on food and nutrition. If undertaken, please specify by whom and the results.

Comments on nutrition:

5. In-Patients Department (IPD) Activities

5.1 Activities

Table 5.1 (per week or month)

	Hospital Name	Hospital Name	Hospital Name
A. No. of patients end last week/month			
B. No of patients admitted			
C. No. of patients end week/month (A+B-D)			
D. No. Discharged of which:			
D.1 authorized	%		
D.2 unauthorized	%		
D.3 deaths	%		
D.4 transferred	%		
No. of beds			

Average length of stay (No. Of days)			
Occupancy rate	%		

5.2 *Main Causes of discharge/deaths in IPDs*

Table 5.2 (per week or month).

	Hospital Name:		**Hospital Name:**		**Hospital Name:**	
	Number of cases	Number of deaths	Number of cases	Number of deaths	Number of cases	Number of deaths
Malaria						
Pneumonia						
Watery diarrhoea						
Bloody diarrhoea						
Meningitis						
Measles						

Comments on IPDs:

6. Referral System

6.1 Total number of patients transferred for admission and where:

6.2 Causes of transfer

Table 6.2

	Camp Name:		Camp Name:		Camp Name:	
	Number of cases	% of the total	Number of cases	% of the total	Number of cases	% of the total
Obstetrics						
Surgery						
Paediatrics						
Internal medicine						
Blood						

~~transfusion~~						
Total						

Comments:

7. Main Health Programmes
7.1 Reproductive Health
7.1.1 Safe motherhood

a. Deliveries: Birth

Table 7.1.1

Camp names	Number	Crude Birth Rate*
Total A: a1 + a2 + a3		

$$*\,\text{CrudeBirthRate} = \frac{\text{Number of births in a year}}{\text{Total population}} \times 1{,}000$$

- **a1: total # and % of birth in health centre or hospital:**
- **a2: total # and % of birth assisted by a *Trained* Birth Attendant (but outside health centre or hospital):**
- **a3: total # and % of other births (i.e. A - (a1 + a2):**
- **total number and % of complicated deliveries:**
- **total # of cases of neonatal tetanus:**
- **total # and % of deliveries with adequate Tetanus Toxoid (TT) coverage:**

b. Ante-natal care (ANC)

- **total # of expected pregnancies per year:**
- **total # of new ANC consultations (last 3 months) and % compared to expected:**

- **% of women with three ANC visits at delivery:**

- **are supplements given to pregnant women? specify criteria and supplements provided:**

- **RPR test (syphilis test): % of positive tests:**

c. Other information

- **maternal mortality: # and incidence per 100,000 live birth per year:**

- **Peri/neonatal mortality: # and incidence per 1,000 live birth per year:**

- **# of abortions and % per number of pregnancies:**

- **low birth weight (below 2.5 kg): provide # and percentage per total number of births:**

- **# and percentage of total number of births having a post-natal consultation:**

7.1.2 Sexual and gender based violence

- **# of cases of sexual and gender based violence per month (incidence per 10,000):**
- **is there any special programme for Female Genital Mutilation (where prevalent)? if yes, give brief description:**

7.1.3 STDs including HIV / AIDS

- **enforcement of universal precautions:**
- **% of blood tested for HIV before transfusion:**
- **% of HIV positive among blood tested:**
- **distribution of condoms, # and percentage of acceptance:**

7.1.4 Family Planning (every three months)

- **number of new acceptors in last three months, per method:**
- **total # and % of acceptors per method:**

7.1.5 Adolescents

Is there any special programme for adolescents? if yes, give a brief description:

Comments on reproductive health:

7.2 Extended Programme of Immunizations (EPI)

- **measles vaccination coverage:**
- **other antigens coverage:**
- **are there any vaccine preventable diseases prevalent in the camps?:**
- **comments:**

7.3 Tuberculosis (every three months and not usually during the emergency phase)

- **expected number of new cases per year (i.e. prevalence in country of origin):**

- **treatment protocols:**

Table 7.3

	January-March	April-June	July-September	October-Dec.
A. No. under treatment at beginning				
B. No. of new cases				
C. No. of discharged of which:				
C.1 cured	%			
C.2 defaulters	%			
C.3 deaths	%			
C.4 transferred	%			
Total at end of period: A+B-C				

7.4 Cholera/Meningitis/Hepatitis/Micronutrients deficiencies etc.

On daily, weekly and/or monthly basis: number of cases, number of deaths and attack rate (cumulative) and Case Fatality Rate (cumulative). Graphic representation could be attached to the report.

7.5 Mental health

Provide a description of the mental health programme.

7.6 Training activities

Provide a description of training activities which have taken place during the reporting period: type of training, by whom, to whom, etc.

7.7 Laboratory activities

8. Information on other vital sectors

- **availability of potable water: # litres per person per day**

- **availability of functioning latrines per # of persons**
- **% of population with adequate shelter**
- **quantity of soap available per person per month**
- **specify vector control activities**

Annex 2 - Possible organisation of health services in a major emergency Number of births in a year

	Unit/Location	Level	Health staff	Outline of major responsibilities
	• Health Coordinating Committee with all partners, this may be decentralised as appropriate • Refugee	Capital/national level	• UNHCR Health Coordinator or Health professionals, Nutritionist, Pharmacist, Health	• Planning and monitoring pro-grammes • Preparation and dissemination of guidelines on standard procedures • Overall coordination and supervision

	Health Unit (with Ministry of Health if possible or as part of UNHCR programme team)		Administrator	• Procurement and supply of drugs and equipment
3rd level	Regional/district Hospital	Regional or district level	• If necessary: say, 1 doctor, 2 nurses to help existing staff (plus material support if required, especially food and drugs)	• Complicated obstetric cases and surgical emergencies on referral from settlement • Reference laboratory

			• Cost per patient or per treat-ment could also be negotiated with the hospital	
2nd level	Health Centre (with limited beds for overnight stay, as guidance: 1 bed per 2,000 to 5,000 refugees)	Each refugee settlement of about 30,000	• As guidance: 2 doctors, 6-8 nurses, 1 midwife • About 10 health workers (1 health worker per 50 - 70 consultations per day)	• Supervision of settlement health services including training health workers and any selective feeding programmes • Treatment of patients not handled at 1st level • Security, distribution and use of

				drugs • Basic laboratory • Referral to third level
1st level	1 Health Post or clinic	Section level approximately 5,000 refugees	• As guidance, 1 nurse (from above) and 2-3 refugee or national health workers per section	• Section level services, both preventative and basic curative care • Supervision of outreach services
	The community	Outreach services (organized by section of, say 1 Community Health Worker per 1,000 and	• Refugee Community Health Workers	• Identification of public and individual health and nutritional problems • Referring sick patients to health

		1 traditional birth attendant per 3,000 refugees)		post • Home visiting • Basic surveillance of mortality and birth

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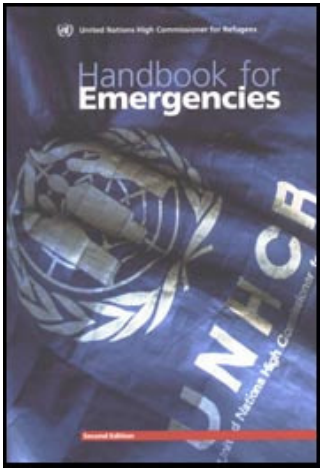

- 3. Emergency Management
- 4. Contingency Planning
- 5. Initial Assessment, Immediate Response
- 6. Operations Planning
- 7. Coordination and Site Level Organization
- 8. Implementing Arrangements
- 9. External Relations
- 10. Community Services and Education
- 11. Population Estimation and Registration
- 12. Site Selection, Planning and Shelter
- 13. Commodity Distribution
- 14. Health
- 15. Food and Nutrition
- 16. Water
- 17. Environmental Sanitation
- 18. Supplies and Transport
- 19. Voluntary Repatriation
- 20. Administration, Staffing and Finance
- 21. Communications

Using the Handbook

Figure

Chapters may be located quickly by using the key on the contents page. Particular subjects may be located by using the index. The handbook is structured as follows:

Section One summarizes UNHCR's mandate of international protection and the aim and principles of emergency response;

Section Two deals with emergency management;

Section Three covers the vital sectors and problem areas in refugee emergencies, including health, food, sanitation and water, as well as key field activities underpinning the operations such as logistics, community services and registration. The chapters in this section start with a summary so that readers, who might not need the full level of detail in each of these chapters, can understand the basic principles of the subject quickly;

Section Four gives guidance on the support to field operations, primarily administration and staffing;

The Appendices include UNHCR's *Catalogue of Emergency Response Resources,* which set out what resources can be immediately deployed, and how and when. The appendices also include a "Toolbox" which gathers, in one location, the standards, indicators and useful references used throughout the handbook.

In addition to the *Catalogue of Emergency Response Resources,* another key companion reference is the *Checklist for the Emergency Administrator* to which is annexed many of the essential UNHCR

forms, policy documents, and guidelines referred to in this handbook, which are necessary for the administrator setting up a new office. Another key companion reference is the *UNHCR Manual*- this is valid at time of going to press; however, chapter 4 of the *Manual* dealing with programme and project management is due to be updated and replaced by the *Operations Management System Field Manual.*

Any part of this handbook may be copied or adapted, provided that the source is acknowledged.

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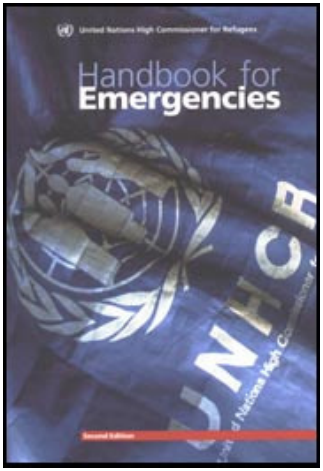
Handbook for Emergencies - Second Edition (UNHCR, 1999, 414 p.)
15. Food and Nutrition
(introduction...)
Overview
Introduction



Handbook for Emergencies - Second Edition (UNHCR, 1999, 414 p.)

15. Food and Nutrition

Figure

Overview

Situation

In emergencies, food and nutritional security is often severely threatened. This causes increased risk of malnutrition, disease and death. Therefore, refugees will need partial or full food support. Some may also need nutritional rehabilitation.

Objective

To provide the refugees with sufficient quantities of appropriate food to maintain their health and nutritional status and, where necessary, to improve the condition of those who are already malnourished.

Principles of Response

- **Measures to meet food needs should be appropriate and standardized, with responsibilities clearly defined, and the overall co-ordination ensured by a single organization;**

- **Whenever possible use familiar foods that meet nutritional**

requirements and maintain sound traditional food habits;

- **The food distribution system should allow families to prepare their own meals;**

- **Pay particular attention to infant feeding and the needs of children, women and others prone to malnutrition;**

- **Maintain close co-ordination with the other vital sectors (health, water, environmental sanitation, etc.) and aim for maximum integration in existing services;**

- **Ensure the active involvement of a nutritionist.**

Action

- **Assess health and nutritional status and food needs as soon as possible;**

- **Ensure the availability of appropriate food and the necessary transport, storage, cooking fuel and utensils;**

- **Organize a general feeding programme for all refugees and,**

if necessary, selective feeding programmes to meet the additional needs of children, women and others;

- **Monitor effectiveness of feeding programmes and make necessary changes.**

Introduction

1. In an emergency, refugees may be completely dependent on external food sources. An initial assessment of their health and nutritional condition and their numbers must be made as soon as possible. The types of programmes needed will be determined by this initial assessment. Continuous monitoring of nutritional status will ensure that the emphasis on different programmes can be adjusted in order to reflect changing conditions.

2. The causes of malnutrition are often complex and multi-sectoral (see Fig 1). Therefore coordinating the food and nutrition programmes with health and other vital sectors is essential.

3. Assistance must be appropriate to the nutritional needs of the refugees and be culturally acceptable. Foods prepared locally with

local ingredients are preferable to imported foods. Infant feeding policies require particular attention.

4. Certain groups are more at risk of malnutrition than others. These include infants, children, pregnant women and nursing mothers, the sick and the elderly. Special action is required to identify the malnourished and vulnerable and to meet their additional needs. Where the refugees have already suffered a prolonged food shortage, many will be malnourished by the time of the first assessment.

5. If the refugees are already suffering the effects of severe food shortage, immediate action must be taken to provide food available locally which is acceptable to the refugees.

6. If insufficient acceptable food is available locally, it must be brought in from outside, initially by air if necessary. Flexibility and improvisation will be required, and time may be needed to develop the full response set out in this chapter.

7. This chapter should be read in conjunction with "Nutrition Guidelines" Mdecins Sans Frontires (MSF), 1995, and UNHCR/WFP

Guidelines for Estimating Food and Nutritional Needs, 1997 and Selective Feeding Programmes, 1999.

Organization of Food Support

- **The World Food Programme (WFP), the food aid arm of the United Nations system, shares with UNHCR responsibility for meeting the food and nutritional needs of refugees;**

- **The Memorandum of Understanding (MOU) signed between WFP and UNHCR establishes the division of responsibilities and coordination mechanisms for refugee, returnee and internally displaced persons feeding operations;**

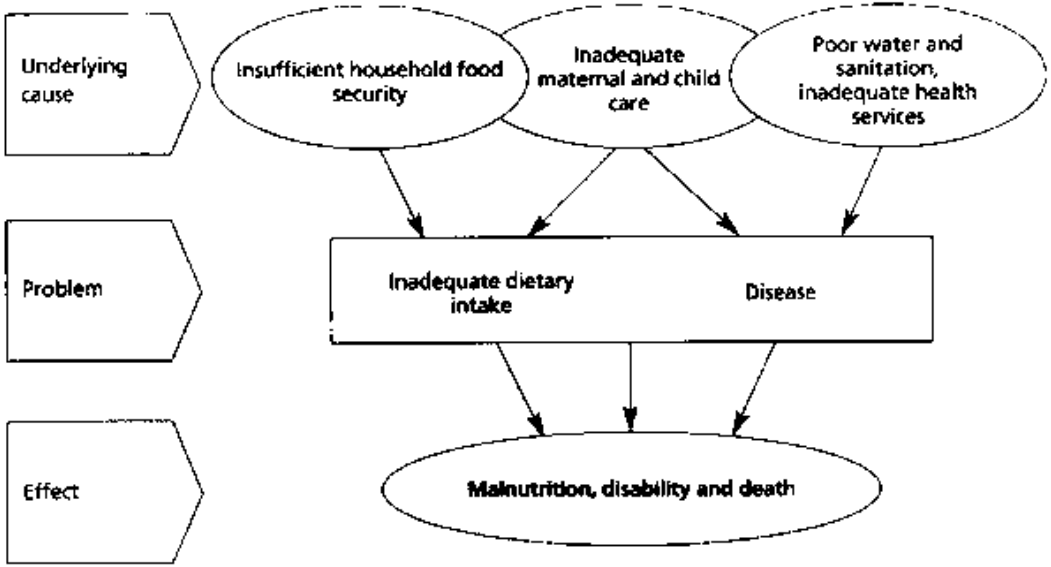
- **The aim of the food programme is to ensure the restoration and maintenance of sound nutritional status through a food ration that meets the assessed requirements, is nutritionally balanced, palatable and culturally acceptable;**

- **In most refugee emergencies a UNHCR food and nutrition co-ordinator should be appointed, who will have overall responsibility for co-ordination of all aspects of the food and**

nutrition programme;

- **The refugees, and in particular refugee women, must be involved in the organization of these programmes;**

- **Simple nutrition education is an integral part of effective food support.**



Adapted from: UNICEF Conceptual Framework of Malnutrition, 1997.

Figure 1 - The Complex causes of malnutrition

Adapted form: UNICEF Conceptual Framework of Malnutrition, 1997.

WFP/UNHCR Co-operation

The objective of WFP/UNHCR co-operation is the timely provision of the right amount of food, to ensure the restoration and maintenance of sound nutritional status.

8. The means to achieve this is through a food ration that meets the assessed requirements, is nutritionally balanced, palatable, culturally acceptable, and promotes gradual self-reliance of the beneficiaries. Essential to this objective is joint UNHCR/WFP planning, from the start of the emergency.

9. A Memorandum of Understanding (MOU) (see Appendix 3) exists between UNHCR and WFP covering cooperation in the provision of food aid. Under the terms of the MOU, WFP meets the emergency food needs of refugees, returnees, and, in specific situations, internally displaced persons, and provides associated logistic support. The terms of the MOU only apply when the beneficiaries in

the country of asylum number more than 5,000, irrespective of their country of origin or their location within the country of asylum. UNHCR will meet the food needs of persons of its concern who are outside the scope of the MOU.

10. Within the scope of the MOU, WFP has the lead responsibility for mobilizing the following food commodities (whether for general or selective feeding programmes) and the resources to deliver them.

WFP resourced commodities include:

i. Cereals;

ii. Edible oils and fats;

iii. Pulses and other sources of protein;

iv. Blended food;

v. Iodized salt;

vi. Sugar;

vii. High energy biscuits.

11. WFP is also responsible for arrangements for milling cereals and transporting WFP commodities to agreed extended delivery points (EDPs), and for the operation and management of the EDPs. UNHCR is responsible for the transportation of all commodities from the EDP to the final destination and for final distribution.

12. Under the MOU, UNHCR is responsible for mobilizing and transporting complementary food commodities and for the provision of the necessary micronutrients (vitamins and minerals) when they cannot be met through the ration.

UNHCR resourced commodities include:

i. Local fresh foods;

ii. Spices and Other condiments;

iii. Tea;

iv. Dried milk;

v. Therapeutic milk.

13. UNHCR and WFP have developed a common set of guidelines for estimating food and nutritional needs in emergencies and in selective feeding programmes[2]. These guidelines should be used to assess the food needs for both the general and selective feeding programmes.

Extended delivery Points (EDP)

An EDP is the location at which WFP hands over a consignment of food to UNHCR or its implementing partner. WFP is responsible for the consignment and all costs incurred in moving and storing it, until UNHCR or its representative collects it from the EDP. In all cases the location of EDPs must be agreed jointly by UNHCR and WFP.

EDPs should be positioned to give cost effective and logistically practical delivery, while avoiding the imposition of undue hardships on the beneficiaries because of travel distance and/or difficult access. Whenever possible the EDP should be at the same place as the final distribution point, or, if not, then as near as possible to it. An EDP should be

established for approximately every 10,000 beneficiaries.

[1] ***WFP/UNHCR Guidelines for Estimating Food and Nutritional Needs in Emergencies, UNHCR/WFP, 1997.***

[2] ***UNHCR/WFP Guidelines for Selective feeding Programmes in Emergencies, WFP, UNHCR, Geneva, 1999.***

Joint Assessment and Planning

14. UNHCR and WFP should carry out a joint assessment of the overall food, nutrition and related requirements in consultation with government authorities, operational partners and experts.

The first requirement is a knowledge of the numbers, nutritional status and food habits of the refugees.

Assessing nutritional status is discussed in detail below. The joint UNHCR/WFP assessment for the food assistance programme should cover the following:

Basic Information

i. Numbers and demography (see chapter 11 on registration);

ii. Current nutritional status;

iii. Milling possibilities;

iv. Food commodity preferences of the beneficiaries;

v. Capacity of the family to prepare, store, and process the food;

vi. Access to cooking fuel, utensils and distribution containers;

vii. Food availability now and over time;

viii. Availability of local food for purchase;

ix. Ease of access to food supplies;

x. Groups at risk - identify who and how many;

xi. Degree of and prospects for self-reliance;

xii. Coping strategies.

Other Important Information

i. Health status and health services;

ii. Environmental health risks;

iii. Community structure;

iv. Food distribution systems;

v. Socio-economic status;

vi. Availability of human resources;

vii. Logistics constraints;

viii. Storage capacity and quality;

ix. Delivery schedule of food and non-food commodities;

x. Other agencies' activities and assistance currently provided: quantity, items and frequency, and selective

feeding programmes.

15. WFP and UNHCR should draw up plans covering: the number of beneficiaries, the composition of the food basket, ration size, duration of assistance, and directly related non-food inputs which may have an impact on the nutritional status of the beneficiaries (for example, cooking utensils, cooking fuel and milling equipment).

16. The main considerations to take into account when responding to food and nutritional needs of refugees are set out in figure 1.

17. Special consideration should be given to the needs of women, children and groups-at-risk. The views of the beneficiaries, especially those of women, should be sought. The proposed food assistance programme should also take into account the need to minimize the environmental impact of cooking the food provided.

Coordination

18. A UNHCR coordinator should be appointed as focal point for food and nutritional issues. In smaller operations, either the programme officer or the logistics officer could be appointed as food

coordinator. If technical expertize is not available initially within UNHCR then assistance should be sought from government nutritionists, UN agencies or NGOs.

19. The food and nutrition coordinator's responsibilities are to establish standard procedures, including procedures for general food distribution, coordinate feeding programmes, monitor and evaluate the feeding programmes, and ensure close coordination and integration with community services, health and other sectors. The coordinator should art as the focal point within UNHCR for coordination with WFP and NGO's. Where the food coordinator is not her/himself a nutrition specialist, an experienced nutritionist will also be needed to provide the food coordinator with the necessary technical advice.

Role of Refugees and Nutrition Education

20. The refugees must be involved from the start in the organization and management of the feeding programmes. Special training will be necessary for refugees.

21. The provision of simple nutrition education for the refugees is

always necessary when unfamiliar foods or new methods of cooking cannot be avoided. This should be organized in conjunction with nutrition education activities and provide guidance on: proper infant feeding, feeding sick children, treating diarrhoea, basic food hygiene and preparing available foods for maximum nutritional benefit.

Cooking Fuel

22. Particular attention must be paid to the provision of cooking fuel and the control and management of the natural resources in the vicinity of the camp. Failure to deal with this can quickly lead to destruction of the vegetation in and around the site causing lasting damage to the environment, with direct effects on the health and well-being of refugees and local people and friction with the local population. Fuel needs and consumption vary considerably[3]-factors affecting the use of fuel include:

i. *food preparation, cooking techniques, fuel type and preparation.* Soaking beans prior to cooking, ensuring lids are used on pots, ensuring wood is dry and chopped, and that fires are put out after cooking - all these make considerable fuel savings and can be incorporated into

environmental awareness raising and training programmes. Other steps to facilitate efficient fuel use are to ensure that the pots supplied have lids.

ii. *type of stove.* It may be possible to use local technology to modify existing types of wood or charcoal burning stoves in order to make them more fuel efficient. Simple improvements and local technologies are best. Note that the social and economic implications of a new technology are usually more important in determining whether it will be adopted than the effectiveness of the technology itself. The promotion and use of improved stoves must closely involve the refugees.

iii. *type of food.* Freshly harvested foods take less cooking time, also using milled rather than whole grain and using pre-cooked food make considerable fuel savings. The environmental implications of the food basket need to be taken into account with WFP.

iv. *availability (or "price")* of fuel itself. This is often the most significant factor affecting per capita fuel consumption. The provision of fuel wood and managing and controlling the

use of natural resources around a refugee camp is discussed further in chapter 12 on site planning.

[3] Average fuel-wood consumption per person per day in different refugee camps has varied from 0.9 kg to 4kg.

Nutritional Assessments

- **The nutrition assessment should be carried out as soon as possible by an experienced nutritionist;**

- **Nutritional assessment should include anthropometric surveys as well as food security information;**

- **Regular assessment is necessary both to monitor the nutritional status of the community as a whole and identify individuals and groups who need special care and food assistance;**

- **Information must be gathered on mortality and morbidity in addition to malnutrition rates, in order to understand the underlying causes of malnutrition and to identify people who**

are most affected.

Introduction

23. An initial assessment of the nutritional status of the refugees should be made as soon as possible and should be carried out by an experienced nutritionist. The extent of malnutrition has important implications for what form the emergency response will take, and will enable early decisions to be taken on the components of the rations and on the requirement for any additional selective feeding programmes.

24. The nutritional assessment should be followed by regular nutrition surveys under specialist supervision to monitor the condition of the population as a whole.

25. Where conditions and/or results of the initial assessment or later surveys indicate a need for selective feeding programmes, individuals will need to be identified and registered for these programmes. Their individual progress should then be monitored through periodic measurements at the feeding centres.

26. The initial nutrition assessment and the periodic nutrition surveys of the population as a whole should be done by measuring the weight and height of a random sample of the child population (as explained below). Initially such surveys should be carried out every two to three months. When conditions have stabilized, once every six to twelve months is sufficient. Any change or trend in nutritional status can thus be detected and appropriate adjustments made in the assistance programmes.

There is a serious nutritional emergency where the malnutrition rate is either over 15%, or over 10% with aggravating factors (e.g. an epidemic). Such a situation requires I urgent action.

Recognizing and Measuring Malnutrition

27. Malnutrition can be recognized by clinical signs (such as oedema and micronutrient deficiencies) and by anthropometry (body measurements). Measurements such as weight-for-height are used as an objective assessment of nutritional status, which quantifies the nutritional situation at one point in time, and allows comparisons over time.

28. Mortality and morbidity information will assist in understanding the underlying causes of malnutrition and identify people who are most affected. Child mortality rates are particularly important.

In an emergency a high child mortality rate is very often associated with high levels of malnutrition.

Death rates among children who are severely malnourished can be about six to ten times greater than those who are healthy and well nourished in the same population.

29. *Weight-for-height in children,* is the best indicator to assess and monitor nutritional status of populations. The actual weight of a child is calculated as a percentage of the standard weight for a normal child of that height, or as a Z score. It is the most sensitive indicator of acute malnutrition and is preferred for nutrition surveys and for measuring individual progress in feeding programmes. It is usually young children aged between 6 and 59 months who are measured in nutrition surveys, because young children are the first to show signs of malnutrition in times of food shortage and are the most severely affected. When the ages of children are not known, 65

cm and 110 cm height are used as the cut off points instead of 6 and 59 months.

30. *Body mass index* (BMI) (Weight in kg)/ (Height in m)^2, is used for assessing the nutritional status of adults by assessing the degree of thinness (see table 1).

31. *Oedema* is an essential nutrition indicator and indicates kwashiorkor (see Annex 3). Oedema is characterized by swelling in both feet due to an abnormal accumulation of fluid in intercellular spaces of the body.

32. *Mid-upper-arm-circumference*

The mid upper arm circumference (MUAC) is measured on the left arm, at the mid-point between elbow and shoulder. MUAC should only be used as part of a two-step screening exercise. In the first step the MUAC of children is measured. Those falling below a certain cut-off circumference are then channelled to weight-for-height measurement to determine their nutritional status and whether they should be included in selective feeding programmes.

33. *Weight-for-age* and *height-for-age* are not such useful assessment indicators in emergencies as age is often difficult to determine. This can be used for growth monitoring of individual children, and in assessing long-term (chronic) malnutrition.

Moderate and Severe Malnutrition

34. The standard cut-off points to describe malnutrition, are between 70% and 80% weight-for-height (or between -3 and -2 Z scores) for moderately malnourished and less than 70% weight-for-height (or < -3 Z scores) for severely malnourished.

Children with oedema are always classified as severely malnourished.

Table 1 summarizes the key malnutrition indicators.

Table 1: Key Nutritional Indicators*

Malnutrition	Children under 5 years			Adults BMI
	Weight-for-	Weight-for-	MUAC	

	height (W/H)% of median value[4]	height (W/H) in Z scores or SD's[5]		
Moderate	**70% to 79%**	**-3 to -2 Z**	**110mm to <125mm**	**16-17**
Severe	**less than 70%**	**less than -3 Z or oedema**	**< 110mm, oedema**	**less than 16**

*** Results expressed by different methods are not directly comparable**

[4] ***Percentage below the median "reference" weight-for-height values.***

[5] ***Standard deviations (SDs, or Z score) below the median "reference" weight-for-height values.***

General Feeding Programme

- **A mean figure of 2,100 kcal per person per day is used as**

the planning figure for calculating the food energy requirements of refugees in emergencies in developing countries[6];

- **Everyone in the population, irrespective of age or sex, should receive exactly the same general ration (i.e. same quantity and type of foods);**

- **The food basket should be nutritionally balanced and suitable for children and other groups at risk;**

- **Every effort should be made to provide familiar foodstuffs and maintain traditional food habits;**

- **The level of fat intake should provide at least 17% of the dietary energy of the ration. Protein intake should provide at least 10-12% of the total energy;**

- **The diet must meet essential vitamin and mineral requirements;**

- **Particular attention should be paid to locally prevalent**

nutrient deficiencies.

[6] *The Management of Nutritional Emergencies in Large Populations, WHO, Geneva, 1978.*

General Ration

35. Every effort should be made to provide familiar foodstuffs and maintain sound traditional food habits. Expert advice on the ration size and composition is essential and should take full account of local availability of food commodities. Staple food should not be changed simply because unfamiliar substitutes are readily available. Inappropriate foods often lead to waste and lower the morale of the refugees.

36. The first concern is to ensure that energy and protein requirements are met. The planning figure for the average minimum daily energy requirement per person per day for a developing country population at the beginning of an emergency is 2,100 kcal. See Annex 1 for examples of rations which meet this requirement. This average requirement is calculated on an average population containing men, women and children of different age groups.

However, a complete ration should be provided to each refugee without distinction.

A minimum requirement of 2,100 kcal per person per day is used as the planning figure for a developing country population at the beginning of an emergency.

A population which contains mostly active adults may require considerably higher average energy intakes. In addition, a higher ration is vital for survival in a cold climate.

37. The daily energy requirement can be adjusted when the situation has stabilized[7] and detailed data is available. Factors to be taken into consideration are:

i. Age and sex composition of the population;

ii. Activity level;

iii. Climatic conditions;

iv. Health, nutritional and physiological status;

v. People's access to other food sources e.g. agriculture, trade, labour.

38. The food basket should comprise: a staple food source (cereals), an energy source (fats and oils), a protein source (legumes, blended foods, meat, fish), salt and possibly condiments (such as spices). Fresh foods should be included in the food basket for essential micronutrients. The level of fat intake should provide at least 17% of the dietary energy of the ration, and protein intake should provide at least 10-12% of the total energy.

39. When certain food commodities are not available, they can be replaced for a maximum of one month by other available food items in order to maintain the adequate energy and protein level. Substitution in energy value, should an item not be available, is:

Corn Soy Blend (CSB) for beans	1:1
Sugar for oil	2:1
Cereal for beans	2:1
Cereal for oil[8]	3:1

E.g. the energy from 20 g of sugar can substitute for that from 10 g of vegetable oil.

40. Cereal flour, rather than whole grain, should be provided, especially at the beginning of an emergency. Considerable fuel savings are made by using milled rather than whole grain. If whole grains are provided, local milling should be made available and the cost compensated for.

41. Essential vitamin and mineral requirements must also be met. The basic food commodities distributed through the general ration do not normally cover the required amounts of vitamins and minerals. Therefore, deficiencies often arise among populations entirely dependent on external food aid and within a population among vulnerable groups like infants, pregnant women and nursing mothers. Particular attention should also be paid to locally prevalent nutrient deficiencies.

42. The risk of specific nutrient deficiencies can be estimated from the composition of the general ration and access the population has to other food sources in the area. Possible options for providing vitamins and minerals are:

i. Provide fresh food products;

ii. Promote the production of vegetables and fruits;

iii. Add to the ration a food rich in a particular vitamin and micronutrient such as fortified cereals, blended foods, or condiments;

iv. Provide supplements in tablet form, which is the least preferred option.

43. Wherever possible the refugees should be encouraged to grow vegetables themselves: the production of fresh food by refugees not only improves and diversifies the diet but saves fuel and provides an opportunity to generate some income. Larger plot sizes and the provision of appropriate seeds would facilitate this, however, it can be difficult to encourage refugees to produce fresh food because of their uncertainty as to the length of their stay and problems of access to land.

[7] See for further information: WFP/UNHCR Guidelines for Estimating Food and Nutritional Needs in Emergencies, 1997.

8 One way only, note that oil cannot be used in place of cereal.

Food Distribution

44. The need for a fair, efficient and regular food distribution cannot be over-emphasized. This is discussed in chapter 13 on commodity distribution. There are two main types of distribution: dry ration and cooked meals.

45. Dry food distribution (which is taken home) has major advantages over cooked food distribution. It allows families to prepare their food and to use their time as they wish, permits them to continue to eat together as a unit and is more culturally and socially acceptable. It also reduces the risk of the spread of infectious diseases.

46. Cooked meal distribution requires centralized kitchens with adequate utensils, water and fuel (the requirement is less than the amount required for family cooking), and trained personnel. The refugees usually sit together in a feeding compound, although in some circumstances families can carry the cooked meal to their

accommodation. At least two meals must be served each day.

Cooked meals are much more difficult to organize efficiently than dry ration distribution, particularly for large numbers.

Cooked meal distribution to the whole population is therefore only provided under exceptional circumstances when the refugees do not have access to adequate water and/or cooking fuel and in insecure situations.

47. In addition to cooking pots, fuel and utensils, the refugees must have containers and sacks to protect and store their food rations. Oil tins and grain bags will be useful, and contracts with suppliers, at least for initial deliveries, should not require their return.

Monitoring the General Feeding Programme

48. The general feeding programme can be monitored by:

- **Food basket monitoring: Comparing the quantity and quality of food collected by the refugees at the distribution site on distribution days compared with the planned ration,**

Also by monitoring after the distribution at household level through house visits (on distribution day);

- **Discussing the quality and quantity of the rations regularly with the refugees;**

- **Investigating complaints.**

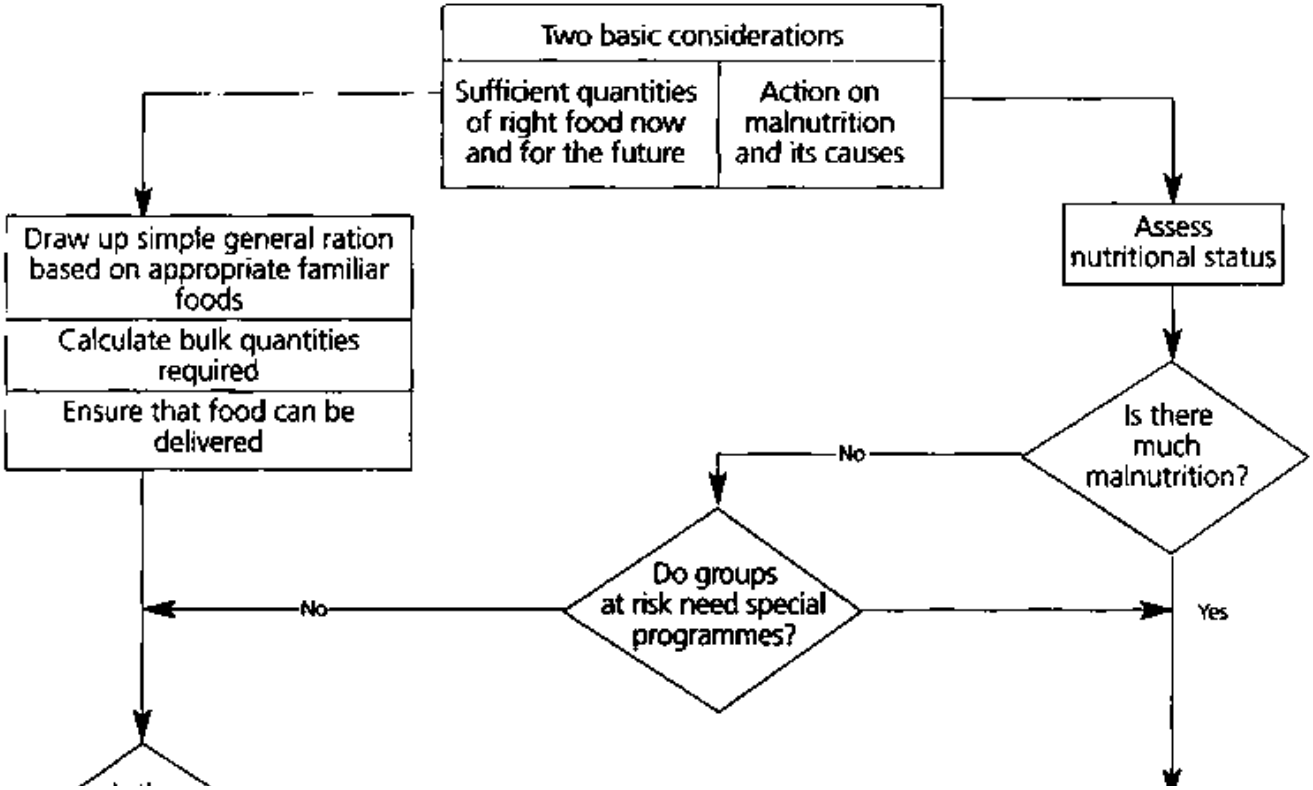
For more information on how to monitor the general food programme see UNHCR's Commodity Distribution: A Practical Guide For Field Staff, and MSF's Nutrition Guidelines.

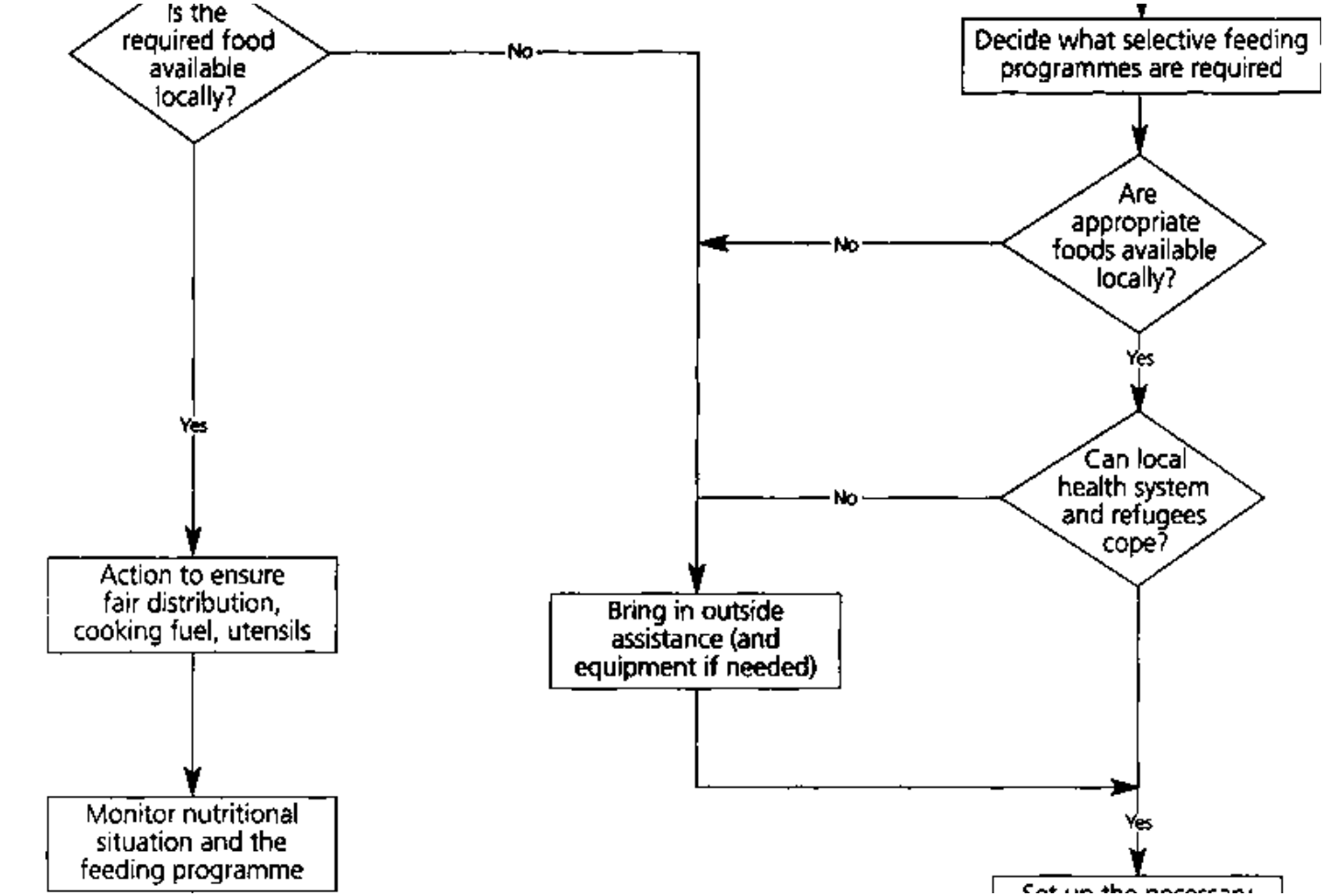
Selective Feeding Programmes

- **The objective of a selective feeding programme is to reduce the prevalence of malnutrition and mortality among the groups at risk;**

- **Selective feeding programmes provide extra food for the malnourished and at-risk groups - this food must be in addition to (not a substitute for) the general feeding programme;**

- **The programme must actively identify those who are eligible for the selective feeding programmes, using criteria described in this chapter.**




Is the required food available locally?
No
Yes
Decide what selective feeding programmes are required
Are appropriate foods available locally?
No
Yes
Can local health system and refugees cope?
No
Yes
Action to ensure fair distribution, cooking fuel, utensils
Monitor nutritional situation and the feeding programme
Bring in outside assistance (and equipment if needed)

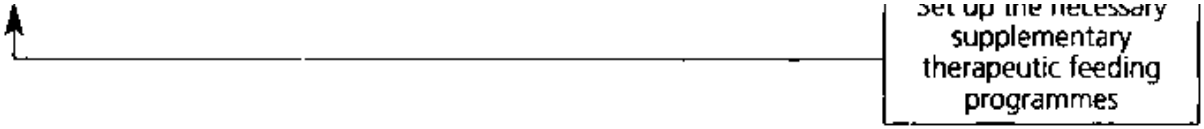


Figure 2 - Response to food and nutritional needs

General Principles of Selective Feeding Programmes

49. Where malnutrition exists or the needs of the groups at risk cannot be met through the general ration, special arrangements are required to provide extra food. This is organized through different types of selective feeding programmes which take into account the degree of malnutrition and associated risks. In the emergency phase of an operation, selective feeding programmes are part of an emergency measure to prevent excess mortality. However, preventing excess mortality should be a combined strategy of selective feeding, public health and emergency health care. Ref. Figure 2.

The organization of these programmes should be integrated from the beginning with community and health services and especially with Mother and Child Health Care programmes (MCH).

50. Malnutrition develops particularly among infants, children, pregnant women, nursing mothers, the elderly and the sick. Their vulnerability stems from the greater nutrient requirements associated with growth, the production of breast milk, repair of tissues and production of antibodies. Malnutrition results in lower resistance to infection, which in turn results in further malnutrition. Small children are particularly susceptible to this cycle of infection and malnutrition. Sick children must eat and drink even if they do not have an appetite, are vomiting, or have diarrhoea. Because children are unable to eat a large volume of food, it is necessary to prepare food in a concentrated form (giving the required nutrients in less volume), and to provide more frequent meals.

51. Certain other groups or individuals may be at risk of malnutrition for social or economic reasons. These include unaccompanied children, the disabled, single-parent families, and the elderly, particularly those without family support. In some communities specific social or cultural practices and taboos may put constraints on meeting the nutritional needs of certain persons, for example pregnant women and nursing mothers or even sick children.

52. Even if the overall quantity of food is sufficient there may be other causes such as:

i. Inequities in the distribution system reducing access to food for certain groups;

ii. Inaccuracies in registration or unfair distribution of ration cards;

iii. Infections;

iv. Faulty feeding or food preparation habits.

Selective feeding programmes are not a substitute for an inadequate general ration.

53. The following types of selective feeding programmes are contemplated:

i. Supplementary Feeding Programmes (SFP)

a) Targeted SFP

b) Blanket SFP;

ii. Therapeutic Feeding Programmes.

To be effective, the extra ration provided must be additional to, and not a substitute for, the general ration.

Supplementary Feeding Programmes (SFP)

54. Targeted and blanket supplementary feeding programmes provide extra food to groups at risk, in addition to the general ration, as dry take-home or wet on-the-spot feeding for a limited period of time.

55. A targeted SFP aims to rehabilitate those who are moderately malnourished. These could be children adults or older persons and/or individuals selected on medical or social grounds, e.g. pregnant and nursing women and the sick. This is the most common type of supplementary feeding programme.

56. A blanket SFP provides a food (and/or micronutrient) supplement to all members of a certain vulnerable group regardless

of their individual nutritional status in order to prevent a deterioration in the nutritional status of those groups most at risk (usually children under five, pregnant women and nursing mothers.

57. Supplementary feeding programmes can be implemented either by giving wet or dry rations.

Therapeutic Feeding Programmes (TFP)

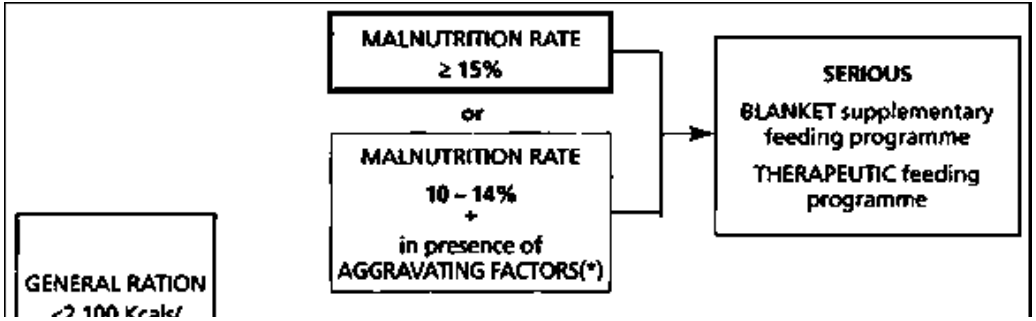
58. A TFP aims to reduce deaths among infants and young children with severe protein-energy malnutrition (PEM). The forms of PEM are described in Annex 3. Generally the target group is children under 5 years with severe malnutrition. Therapeutic feeding can either be implemented in special feeding centres or in a hospital or clinic. TFP involves intensive medical and nutritional treatment. Therapeutic milk (TM) is used for treatment of severely malnourished children. However if TM is not available, high protein milk can be used (dried skimmed milk, oil and sugar) mixed with vitamin mineral supplements.

Starting a Selective Feeding Programme

59. The decision to start a selective feeding programme is based on the prevalence of malnutrition and other aggravating factors. Aggravating factors include high mortality (more than 1 person per 10,000 per day), measles epidemic, high prevalence of infectious diarrhoea, general ration below minimum requirements. The prevalence of malnutrition is assessed from the initial and ongoing nutrition assessments and surveys.

In all situations, remember that it is more important to address the root causes of malnutrition than to address symptoms through selective feeding programmes.

60. The effectiveness of these programmes will be severely compromised if an adequate general ration is not provided.



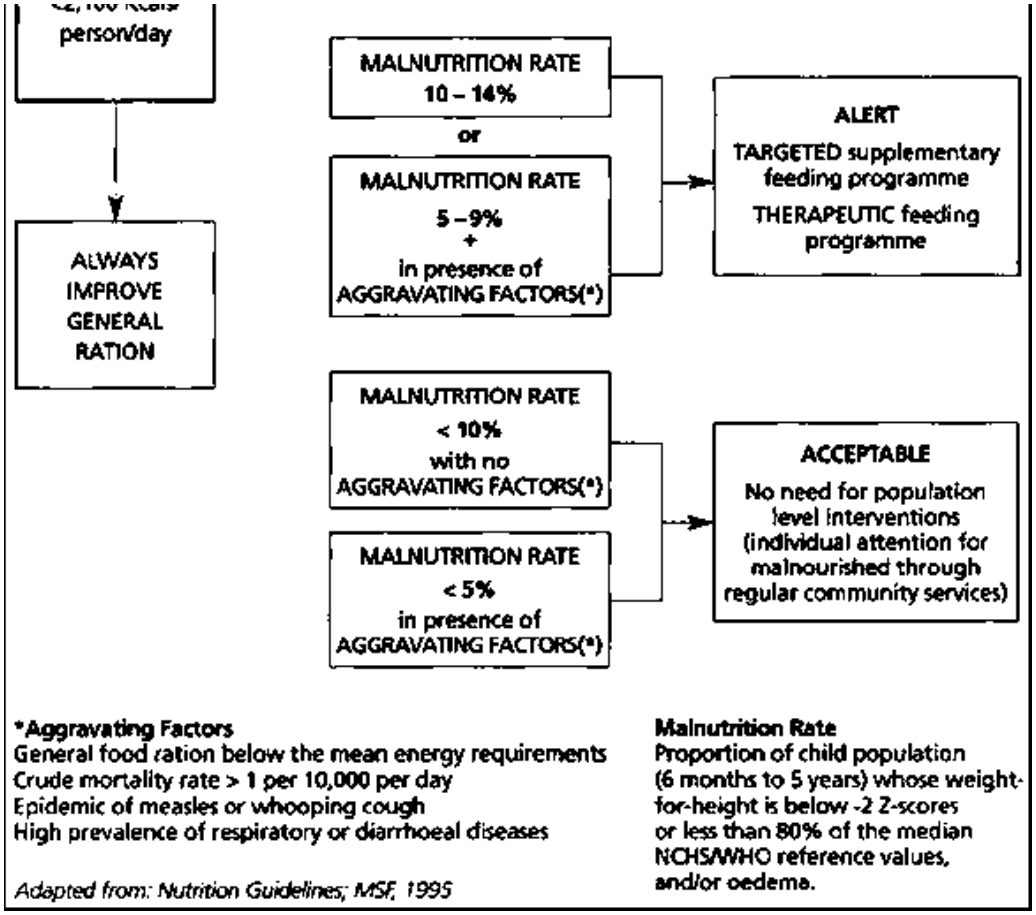


Figure 3 – Selective Feeding Programmes

61. Figure 3 provides guidance on deciding when to initiate selective feeding programmes. Clear criteria for the termination of these programmes should be defined from the beginning.

Identifying Those Eligible

62. Selective feeding programmes must be based on the active identification and follow up of those considered at risk. Beneficiaries can be identified by:

- ❑ **House to house visits to identify all members of a targeted group (e.g. children under five, elderly people);**
- ❑ **Mass screening of all children to identify those moderately or severely malnourished;**
- ❑ **Screening on arrival (for example with the registration exercise);**
- ❑ **Referrals by community services and health services.**

63. Table 2 below summarizes the main objectives, target groups and criteria for selection of beneficiaries of selective feeding

programmes.

Table 2 - Types of Selective Feeding Progammes

Programme	Objectives	Criteria for selection and target group
Targeted SFP	• Correct moderate malnutrition • Prevent moderately malnourished from becoming severely malnourished • Reduce mortality and morbidity risk in children under 5 years • Provide nutritional support to	• Children under 5 years moderately malnourished: - between 70% and 80% of the median weight-for-height or: - between -3 and -2 Z-scores weight-for-height • Malnourished individuals (based on weight-for-height, BMI, MUAC or clinical signs): - older children (between 5 and 10 years) - adolescents - adults and elderly persons - medical referrals • Selected pregnant women (from date of confirmed pregnancy) and nursing mothers (until 6

	selected pregnant women and nursing mothers • Provide follow up service to those discharged from therapeutic feeding programmes	months after delivery), for instance using MUAC <22 cm as a cut-off indicator for pregnant women • Referrals from TFP
Blanket SFP	• Prevent deterioration of nutritional situation • Reduce prevalence of acute mal-nutrition in children under 5 years • Ensure safety net measures	• Children under 3 or under 5 years • All pregnant women (from date of confirmed pregnancy) and nursing mothers (until maximum 6 months after delivery • Other at-risk groups

	• Reduce mortality and morbidity risk	
TFP	• Reduce excess mortality and morbidity risk in children under 5 years • Provide medical/nutritional treatment for the severely malnourished	• Children under 5 years severely malnourished: - < 70% of the median weight-for-height and/or oedema or: - < -3 Z-scores weight-for-height and/or oedema • Severly malnourished children older than 5 year adolescents and adults admitted based on available weight-for-height standards or presence of oedema • Low Birth Weight babies • Orphans < 1 year (only when traditional care practices are inadequate) • Mothers of children younger than one year with breast feeding failure (only in exceptional cases where

		relactation through counselling and traditional alternative feeding have failed)

64. The links between different selective feeding programmes and the criteria for entry and discharge from a programme are shown in figure 4 below.

Planning and Organizing a Selective Feeding Programme.

Organizing a Supplementary Feeding Programme

65. Supplementary feeding programmes can be implemented either by providing wet rations or dry rations.

i. Wet rations are prepared in the kitchen of a feeding centre and consumed on-site. The beneficiary, or child and caretaker, have to come for all meals to the feeding centre every day;

ii. Dry rations are distributed to take home for preparation and consumption. Rations are usually distributed once a week.

66. In most situations dry take-home SFP programmes are preferable. The advantages of dry instead of wet rations for SFP include:

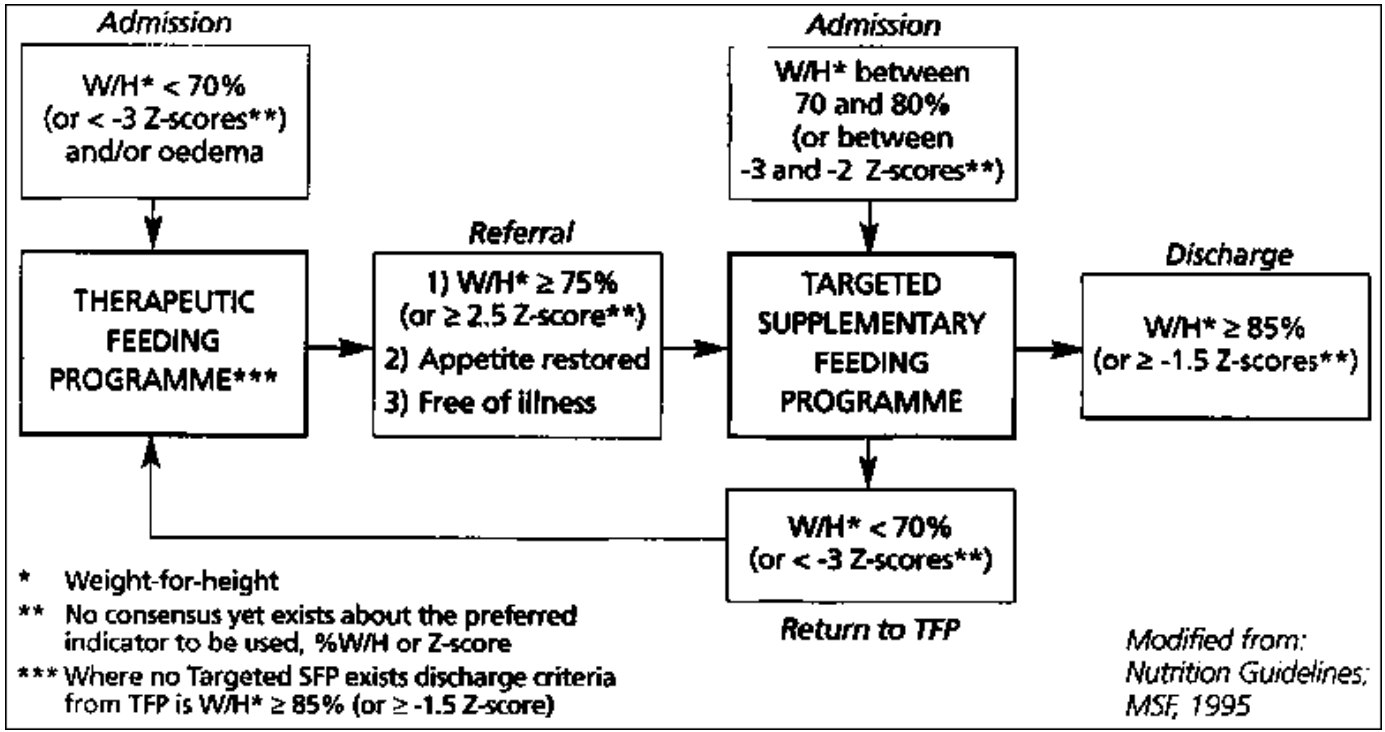


Figure 4 - Admission and discharge Criteria

i. Much easier to organize;

ii. Fewer staff are needed;

iii. Lower risk of transmission of communicable diseases;

iv. Less time-consuming for the mother;

v. The mother's responsibility for feeding the child is preserved.

The ration for dry feeding however has to be higher than for wet feeding in order to compensate for sharing and substitution. Wet rations are typically given in situations where insecurity prevents dry rations from being taken home safely or where access to cooking facilities are limited. See Table 3 below for some of the main considerations when organizing a selective feeding programme.

Organizing a Therapeutic Feeding Programme

67. Therapeutic feeding programmes are either implemented in specially organized feeding centres or in hospitals or clinics. They

involve intensive medical and nutritional treatment as well as rehydration. The programme should be easily accessible to the population, near to or integrated into a health facility. The treatment should be carried out in phases (see Table 3), the length of which depend on the severity of malnutrition and/or medical complications. At least during the first week of a TFP, care has to be provided on a 24-hour basis.

Table 3

Organization of Selective Feeding Programmes			
	Supplementary Feeding Programme		**Therapeutic Feeding Programme**
Organization	• On site wet feeding • Same medical care On site feeding would usually only be	• Take home dry feeding This is the preferred option for both blanket and targeted	• On site wet feeding + • Intensive medical care + • Psychological stimulation during rehabilitation phase

	considered for targeted SFP	programmes	
Size of extra ration	• 500-700kcal/ person/day, and • 15-25 g protein	• 1,000-1,200 kcal/person/day, and • 35-45 g protein	• 150 kcal/kg body-weight/day/ patient. And • 3-4 g protein per kg body-weight/day/patient
Frequency of meals	Minimum 2 meals/day	Ration distributed once per week	Frequent meals. Phase 1:8-10 meals over a 24 hour period Rehabilitation phase: 4-6 meats

68. One of the main constraints to the implementation of a TFP is the lack of experienced or insufficient staff to manage the programme. Proper training of both medical and non-medical personnel is essential before starting the programme. The refugees, particularly the mothers of patients, must be involved in managing the TFP centres.

Planning the quantity of food needed for selective feeding

69. The amount of food needed for the selective feeding programme will depend on:

i. The type of selective programme;

ii. The type of commodities;

iii. The expected number of beneficiaries.

70. This information should be based on precise demographic information and on the prevalence of malnutrition taken from the results of the nutritional survey. The nutritionist will advise on the appropriate commodities and type of programme.

71. However, in some circumstances, estimates on the prevalence of malnutrition and expected number of beneficiaries may need to be made for planning purposes, when for example a registration and nutrition assessment have not yet been carried out. See table 4 below for a projected demographic breakdown for a typical population.

72. If it is apparent that there is, or is likely to be, a major nutritional emergency, the following assumptions can be made for planning purposes:

i. 15 to 20% may suffer from moderate malnutrition;

ii. 2 to 3% may be severely malnourished;

iii. The breakdown of a typical population, by age, is as follows:

Table 4

Projected Breakdown by Age	
age groups	% total population
0-4 or under 5	15-20%
Pregnant	1.5-3%
Lactating	3-5%

73. For example, to estimate the number of beneficiaries for a targeted SFP and TFP, both for children under 5 years:

If the total population = 30,000

Estimated number under 5 yrs = 4,500 -6,000(15-20%)

Estimated prevalence of moderate malnutrition (15%) gives 675-900 children

Estimated prevalence of severe malnutrition (2%) gives 90-120 children

With these numbers the estimated food requirements can be calculated by multiplying the estimated number of beneficiaries for each programme by the ration scale appropriate for each beneficiary, as follows:

Quantity of Commodity req. = Ration / person / day × no. benef. × no. days

Monitoring Selective Feeding Programmes

74. The effectiveness of impact of the selective feeding programme should be monitored at regular intervals.

75. Selective feeding programmes should be monitored and evaluated to assess their performance in relation to the established objectives[9]. Monitoring and evaluation will involve the regular collection and analysis of:

- **Process indicators such as attendance, coverage and recovery rates, to evaluate the success in implementation and trends in the programme over time;**

- **Impact indicators such as malnutrition prevalence, mortality rate and numbers served, to evaluate the effectiveness and efficacy of the programme.**

76. The effectiveness of selective feeding programmes can be measured through nutrition surveys and the regular collection of feeding centre statistics. Specific forms for monthly reporting on supplementary and therapeutic feeding programmes are attached as Annexes 4 and 5. A nutrition survey results form (weight-for-height) is also attached (Annex 6).

77. Trends in health and nutrition indicators can be related to many different factors. Actions in other sectors such as water, shelter, or

community services may help explain a positive outcome.

> **9** ***For further reference, consult Chapter 8: Evaluation of Feeding Programmes in the MSF Nutrition Guidelines.***

Criteria for Closing Programmes

78. Once the number of malnourished is significantly reduced, it may be more efficient to manage the remaining severely malnourished individuals through health facilities and through community based programmes. The specific criteria for closing each selective feeding programme will depend on the degree of success in reducing the main aggravating factors mentioned in Figure 3 and on the degree of integration between these feeding programmes and mother and child health (MCH) activities and other support services offered by the refugee community.

79. After closing selective feeding programmes, any deterioration of the situation should be detected by nutrition surveys undertaken at regular intervals and review of morbidity and mortality data. This is especially important if the overall situation remains unstable.

Infant Feeding and use of Milk Products

- **Breast-feeding is best for babies and must be promoted and continued for as long as possible;**
- **Ban baby bottles completely;**
- **Weaning foods must be appropriate; foreign baby foods and special foods often are not;**
- **Infant formulae should be avoided and used only under strictly controlled conditions, with a cup and spoon;**
- **Re-stimulate lactation[10] in cases where milk production has been affected by stress and use wet nursing where appropriate;**
- **Milk products, especially powdered milk, and infant formulae can cause health problems (as described below) and they are often inappropriate.**

80. Human milk is the best and safest for infants and children under two years. Breast-feeding provides a secure and hygienic source of

food, often initially the only source of food, as well as antibodies giving protection against some infectious diseases. Breast feeding must be encouraged for as long as possible. Every effort must be made to promote or re-stimulate lactation even among sick and malnourished mothers. Experience has shown that this can be done. Mothers may need to receive extra food to encourage breast-feeding and provide the additional calories and nutrients required. This should be done through the feeding programmes.

81. The problems associated with infant formulae, milk products and feeding bottles are exacerbated in a refugee emergency. Clean boiled water is essential but rarely available, careful dilution of the feeds is of critical importance but difficult to control, mothers are unlikely to be familiar with the use of infant formulae, and the instructions are often in a foreign language. Infant formulae, if unavoidable, should be distributed from health or feeding centres under strictly controlled conditions and proper supervision. Infant feeding bottles must never be distributed or used; they are almost impossible to sterilize and keep sterile under emergency conditions and are therefore dangerous. Babies should be fed by clean cup and spoon if necessary. Appropriate weaning foods should be introduced while breast-feeding is continuing. Weaning foods should be locally

available foodstuffs and as far as possible be prepared in the traditional manner. Overseas donations of tinned baby foods are rarely appropriate.

[10] ***Re-stimulate lactation refers to the re-establishment of an adequate volume of milk release. This is achieved by increasing suckling and through social peer support.***

Policy On Use of Milk Powder[11]

i. Never distribute milk powder, by itself, to take home. It should be mixed with cereal flour, six parts cereal to one part milk powder;

ii. Never let liquid milk be carried home;

iii. Only use dried milk in supervised wet feeding programmes as a high energy drink mixed with oil and sugar;

iv. Dried skimmed milk should always be fortified with Vitamin A and have a Shelf-life Of more than six months.

[11]UNHCR IOM 88/89/FOM 76/89 Policy Directive for

acceptance, distribution and use of milk products in refugee feeding centres, UNHCR, Geneva.

Key References

***Calculation of Nutritional value of Food Commodities (NUT-VAL), an EXCEL spreadsheet which can be used to calculate the nutritional value of ration scales,* UNHCR, Geneva, 1998.**

***Commodity Distribution: A Practical Guide For Field Staff,* UNHCR, June 1997.**

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***Nutrition Guidelines,* Mdecins Sans Frontires (MSF), 1995. Essential Reading.**

Nutrition Surveys in Emergency Situations, (Video, PAL, 38 min),

UNHCR Geneva.

WFP/UNHCR Guidelines For Estimating Food and Nutritional Needs, **Also available in French. WFP/UNHCR, 1997.**

WFP/UNHCR Guidelines For Selective Feeding Programmes in Emergency Situations, **WFP/ UNHCR, 1999.**

Glossary

Anthropometric measurements	Assessment of body size and composition which reflects food intake, physical activity and disease. Most common anthropometric indicators include weight, height and arm circumference.
Baseline data	Data collected at the beginning of a programme that can be compared with similar data collected later and so used to evaluate the impact of interventions or to monitor trends.
Body Mass Index (BMI)	(weight in kg)/ (height in m)^2 which is used for assessing the nutritional status of adolescents and adults.
Fortified	A flour composed of pre-cooked cereals and a protein

Fortified blended food	A flour composed of pre-cooked cereals and a protein source, mostly legumes, fortified with vitamins and minerals, e.g. corn soya blend (CSB), wheat soya blend (WSB) used for feeding programmes.
Fortification	Adding micronutrients to foods, e.g. iodized salt and fortified blended food.
Kilocalorie	Unit of energy used in nutrition, 1 Kcal = 4.17 kilojoules.
Kwashiorkor	Severe form of malnutrition characterized by oedema (swelling) particularly of the lower parts of the arms and legs.
Marasmus	Severe form of malnutrition in which the person becomes wasted.
Micronutrients	Minerals and vitamins.
Mid-upper arm circumference (MUAC)	Circumference at the mid-point of the left upper arm, which is an indicator of malnutrition and used as a tool for screening.
Nutrients	Those parts of food that are absorbed and/or used by the body i.e. carbohydrate, protein, fat, alcohol, vitamins and minerals.
Oedema	An abnormal accumulation of fluid in intercellular spaces

Oedema	An abnormal accumulation of fluid in intercellular spaces of the body. In case of nutritional oedema this is oedema due to a deficiency in the diet.
On-site feeding	Cooked meal eaten at the feeding centre.
Stunting	Low height for age. Comparing the height of a child of a certain age with the height of reference (healthy) children of the same age indicates the level of chronic malnutrition.
Take-home rations	Dry rations that are given to people to take and prepare at home.
Therapeutic milk	Special milk used for rehabilitation of severely malnourished persons.
Wasting	Abnormal loss of fat and/or muscle tissue which is indicated by a low weight for height, a low body mass index or observation (thinness).
Xerophthalmia	Clinical signs in the eye caused by Vitamin A deficiency.
Weight-for-Height	The weight of a person at a certain height compared with the reference weight for that height.

Annexes

Annex 1 - Basic Facts About Food and Nutrition

All foods are made up of five basic types of nutrient in addition to variable amounts of water.

Carbohydrates, the main source of energy, provide 4 kcal/g. They are mostly starches and sugars of vegetable origin, and are a major component of cereals and tubers.

Fats and oils provide the most concentrated source of energy, and have more than twice the energy content per weight of carbohydrates and proteins (9/kcal/g).

Proteins are body-building substances required for growth and tissue repair. Protein is found in foods of animal origin and in cereals and legumes and provide 4 kcal/g.

Vitamins and minerals are needed in small quantities for the adequate functioning of the body and protection against disease. Fresh vegetables and fruits are a good source of vitamins. Water soluble vitamins are fragile and cannot be stored (Vitamins Bs and C), whereas fat soluble vitamins can be stored in the body (Vitamin

A and D). Important minerals are iron, sodium, iodine, zinc, magnesium, potassium, etc. Individual vitamins and minerals or combinations are found in all foods in very variable amounts.

Energy and Protein Intakes

If the energy intake is inadequate, some protein will be burnt to provide energy. That is, it will be used in the same ways as carbohydrate or fat. More than 20% of the energy requirement should be supplied from fats and oils which greatly enhance the palatability of the diet and increase energy density (important for younger children). Energy requirements vary widely even in normal individuals. They are also increased by physical activity. Much higher energy and protein intakes are required for the treatment of malnutrition, when the aim is rehabilitation rather than maintenance.

Food and Diets

Most diets in most countries contain adequate amounts of all the nutrients required for good health if enough of the diet is taken to satisfy the individual's energy requirements. Even a growing child, if

healthy, requires no more than 10% of total calories to be supplied from protein sources.

Figure

Annex 1 (cont.) - Nutritional Value Of Food Commodities

COMMODITY	Nutritional Value/100 g			
	Energy Kcal	Protein (g)	Fat (g)	Price per MT in US$
Cereals				
Wheat	330	12.3	1.5	165
Rice	360	7.0	0.5	280
Sorghum/Millet	335	11.0	3.0	200
Maize	350	10.0	4.0	170
Processed Cereals				
Maize meal	360	9.0	3.5	225
Wheat flour	350	11.5	1.5	240
Bulgur wheat	350	11.0	1.5	220
Blended Food				
Corn Soya Blend	380	18.0	6.0	320
Wheat Soya Blend	370	20.0	6.0	390
Soya-fortified bulgur wheat	350	17.0	1.5	240

Soya-fortified maize meal	390	13.0	1.5	270
Soya-fortified wheat flour	360	16.0	1.3	240
Soya-fortified sorghum grits	360	16.0	1.0	190
Dairy Products				
Dried Skim Milk (enriched)	360	36.0	1.0	1,900
Dried Skim Milk (plain)	360	36.0	1.0	1,800
Dried Whole Milk	500	25.0	27.0	2,200
Canned cheese	355	22.5	28.0	1,850
Therapeutic milk	540	14.7	31.5	2,200
Meat and Fish				
Canned meat	220	21.0	15.0	1,950
Dried salted fish	270	47.0	7.5	1,500
Canned fish	305	22.0	24.0	2,000
Oils and Fats				
Vegetable oil	885	-	100.0	750
Butter oil	860	-	98.0	2,300
Edible fat	900	-	100.0	950

Pulses				
Beans	335	20.0	1.2	440
Peas	335	22.0	1.4	375
Lentils	340	20.0	0.6	500
Miscellaneous				
Sugar	400	-	-	350
High Energy Biscuits	450	12.0	15.0	1,250
Tea (black)	-	-		1,235
Iodized salt	-	-	-	150
Dates	245	2.0	0.5	1,900
Dried fruit	270	4.0	0.5	1,200

Note: The prices quoted are free-on-board (FOB) and therefore do not include transportation costs. The prices shown are as of 1998 and will vary over time. This information is regularly updated and published by WFP and is available from WFP HQ's or from their offices in the field.

Annex 1 (cont.) - Characteristics of Common Foods

	Food type	Vitamins and minerals	Comments
1.	Cereal grains (rice, corn, sorghum, oats, etc.)	Contain vitamin B and iron. However these are reduced by milling, i.e. the whiter the flour the greater the loss of vitamins.	The main source of both energy and protein in most diets.
2.	Legumes/oilseeds (beans, peas, soya, groundnuts, etc.)	B complex vitamins. Most contain significant quantities of iron and calcium.	Legumes are particularly useful when eaten with cereals as the proteins complement each other.
3.	Whole tubers and roots (yams, taro,	Variable but	Bulk and low

	cassava, sweet potato, potato, etc.)	generally low, except for potatoes which are rich in vitamin C.	protein content makes them unsuitable as staple foods in emergencies.
4.	Vegetables and fruits	Important source of vitamins and minerals. Variable quantities of B and C vitamins. Dark green leaves or yellow/red pigmentation usually indicates vitamin A compounds.	
5.	Meat, milk and dairy products, eggs, etc.	Good sources of B vitamins.	Usually consumed in

		Whole milk and eggs also good source of vitamin A. Milk and eggs provide significant amounts of calcium.	very small quantities in normal times. They are more readily used by the body than proteins of vegetable origin. Therefore small quantities useful to improve the quality and palatability of diet.
6.	Fish, dried	Rich source of	A concentrated

		calcium and iron. Contains B Vitamins.	source of protein for those who like it. Therefore acceptability trials essential before use.
7.	Fats and oils	Fats derived from milk are sources of vitamin A and D, while vegetable fats contain no vitamin A and D, except for red palm-oil.	Useful way to increase energy intake without increasing bulk of diet. Improves palatability and helps in food preparation.

Annex 2 - Examples of Food Rations

Examples of adequate full rations for the affected population entirely reliant on food assistance[12]

Five types of rations are shown to illustrate differences due to such factors as the food habits of the population and the acceptability and availability of the commodities in the region.

Items	Rations (quantity in grams per person per day)				
	Type 1*	Type2*	Type 3*	Type 4**	Type 5*
Cereal flour/rice/bulgur	400	420	350	420	450
Pulses	60	50	100	60	50
Oil (vit. A fortified)	25	25	25	30	25
Canned fish/meat	-	20		30	
Fortified blended foods	50	40	50	-	-
Sugar	15	20	20		20
Iodized salt	5	5	5	5	5
Fresh veg./fruits	-	-			100

Spices	-	-	-	-	5
Energy: kilocalories	2113	2106	2087	2092	2116
Protein (in g and in % kcal)	58 g; 11 %	60 g; 11 %	72 g; 14%	45 g; 9%	51 g; 10%
Fat (in g and in % kcal)*	43g; 18%	47 g; 20%	43 g; 18%	38 g; 16%	41 g; 17%

**** For rations 1, 2, 3, & 5 the cereal used for the calculation is maize meal***

***** This ration has rice as a cereal; the low percentage energy for protein is acceptable due to its high quality; the slightly low fat content is in line with food habits in rice-eating countries***

Examples of Typical Daily Rations for SFPs (in grammes per person per day)

	Take-home or dry ration	**On-site feeding or wet ration**

Item	Ration 1	Ration 2	Ration 3	Ration 4	Ration 5	Ration 6	Ration 7
Blended food, fortified	**250**	**200**	**100**			**125**	**100**
Cereal					**125**		
High Energy Biscuits (HEB)			**125**[13]				
Oil, fortified with vitamin A	**25**	**20**	**15**	**20**		**10**	**10**
Pulses			**30**	**30**			
Sugar	**20**	**15**				**10**	**10**
Salt, iodized			**5**				
Energy (Kcal)	**1250**	**1000**	**620**	**560**	**700**	**605**	**510**
Protein (g)	**45**	**36 25**		**15**	**20**	**23**	**18**
Fat % Kcal	**30**	**30**	**30**	**30"**	**28**	**26**	**29**

12 WFP/UNHCR Guidelines for estimating food and nutritional needs. December, 1997.

13 ***WFP Specification.***

14 High Energy biscuits with 15% fat meet the energy density requirement.

Annex 3 - Main Nutritional Deficiency Disorders in Emergencies"

Protein-energy malnutrition (PEM) is likely to be the most important health problem and a leading cause of death during an emergency. There are several forms:

Marasmus is marked by the severe wasting of fat and muscle, which the body has broken down for energy, leaving "skin and bones". It is the most common form of PEM in nutritional emergencies.

Kwashiorkor is characterized essentially by oedema (swelling which usually starts in the feet and legs), sometimes accompanied by a characteristic skin rash and/or changes in hair colour (reddish). The hair becomes sparse.

In ***Marasmic kwashiorkor*** there is a combination of severe

wasting and oedema.

Children under 5 years are usually the most affected, but older children and adults are also often at risk or affected. The treatment of severe forms of PEM is presented in the section on selective feeding programmes.

Vitamin and mineral deficiencies can cause long-lasting or permanent disabilities and can be fatal. The deficiencies most likely to occur include:

Iron *deficiency* (1) causes ***anaemia****.* (signs: pallor of skin and eyelids, fatigue, weakness and shortness of breath); (2) increases the risk of haemorrhage, infection and death associated with childbirth; (3) increases rates of low-birth-weight and (4) impairs the cognitive development of infants and children.

Iodine *deficiency* causes not only ***goitre*** but also some impairment of intellectual development of children and of reproductive performance in women. Severe maternal deficiency can cause cretinism in the offspring. Best prevented in emergencies by the use of Iodized salt.

Vitamin A *deficiency* causes ***Xerophthalmia****,* blindness and death.

Eye signs: poor vision in dim light, dryness of conjunctiva or cornea, foamy material on the conjunctiva or clouding of the cornea itself. These signs may appear after several months of an inadequate diet, or following acute or prolonged infections, particularly measles and diarrhoea.

Vitamin B1 (Thiamine) *deficiency* causes ***beri-beri****.* Symptoms and signs: loss of appetite, malaise and severe weakness, especially in the legs; may also lead to paralysis of the limbs or swelling of the body, heart failure and sudden death. Beri-beri occurs when the diet consists almost exclusively of white polished rice or starchy staple such as cassava.

Vitamin C *deficiency* causes ***scurvy****.* Signs: swollen gums which bleed easily, swollen painful joints, easy bruising. This occurs due to a lack of fresh vegetables and fruits.

Niacin *deficiency causes* ***pellagra****.* Signs: skin rash on parts of body exposed to sunlight; diarrhoea; and mental changes leading to dementia. This occurs especially where maize and sorghum are the staples and there is a lack of other foods.

Prevention involves ensuring that people receive or have access to a variety of foods that contain sufficient quantities of essential vitamins and minerals. This also includes fortified food items distributed in food aid, access to local markets, and produce from home gardens.

Treatment consists of administering therapeutic doses of the missing nutrients. The distribution of multi-vitamin tablets to the entire refugee population is a waste of time and money, since they contain insufficient quantities of individual vitamins to correct deficiencies.

15 ***Adapted from: The Management of Nutritional Emergencies in Large Populations, WHO, Geneva, 1999 (in press).***

Annex 4 - Reporting Form: Supplementary Feeding Programme

Country: Location:	Period:	Total population:
Agency:		Under (<) 5 population
		Moderate malnutrition rate:
		Target <5 (moderate malnutrition rate * <5 pop):

Theoretical coverage <5 (new total (J)/Target):

	CATEGORIES							
	< 5 years		≥ 5 years		Pregnant	Lactating	TOTAL	
	M	F	M	F	women	women		
Total at end of last month (A)								
New Admissions:								
< 80% WFH or < -2 Z-score								
Others								
Total New Admissions (B)								
Re-admissions (C)								
Total Admissions (D=B+C)								

Discharged in this period:								percentage for <5 yrs (target):
Discharges (E)								E/I*100%= (>70%)
Deaths (F)								F/I*100%= (<3%)
Defaulters (G)								G/I*100%= (<15%)
Referrals (H)								
Total Discharged (I=E+F+G+H)								
New Total at end of this month (J=A+D-I)								

Average length of stay in the programme

(from all or a sample of 30 recovered children) (target <60 days) =

Total No of days of admission of all (or 30) recovered children
No of recovered children (or 30)

Comments:

Annex 5 - Reporting Form: Therapeutic Feeding Programme

Country: Period: Total population:
Location: Under (<) 5 population
Agency: Moderate malnutrition rate:
Target <5 (moderate malnutrition rate *<5 pop):
Theoretical coverage <5 (new total (J)/Target):

CATEGORIES

	< 5 years		≥ 5 years		Adults		TOTAL	
	M	F	M	F	M	F		
Total at end of last month (A)								
New Admissions:								

New Admissions:								
< 70% WFH or < -3 Z-score								
Kwashiorkor								
Others								
Total New Admissions (B)								
Re-admissions (C)								
Total Admissions (D=B+C)								
Discharged this month:								percentage for <5 yrs (target):
Discharged (E)								E/I*100%= (>75%)
Deaths (F)								F/I*100%= (<10%)
Defaulters (G)								G/I*100%= (<15%)
Referred (H)								

Referrals (H)								
Total Discharged (I=E+F+G+H)								
New Total at end of this month (J=A+D-I)								

Causes of death:

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

weight at end of month (or on exit) - lowest weight recorded during month
lowest weight recorded in last month × No of days between lowest weight recorded and end of month (or on exit)

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

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

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

Total No of days of admission of all (or 30) recovered children
No of recovered children (or 30)

Annex 6 - Nutrition Survey Reporting Form

Country:
Camp:
Date of reporting:

Population	**Male**		**Female**		**Total**
	number	%	number	%	number
total population					
under five population					

Survey	
date:	...../...../...../
method:	random - systematic - cluster

sample size:						
under five population	Male		Female		Total	
(6-59 month or 65-110 cm)	number	%	number	%	number	

Results							
weight-for-height % median				weight-for-height Z-score			
category	number	%	confidence interval	category	number	%	confidence interval
<70% and/or oedema				≤ 3 and/or oedema			
>70 and >80%				≥3 and ≥2			
total				total			

Other results:

(mean Z-score, mean SD, family size, % children in each category

that is attending feeding center)

Comments/Observations:

Action/Intervention: