

Guiding principles for feeding infants and young children during emergencies



WORLD HEALTH ORGANIZATION

GENEVA

2004

WHO Library Cataloguing-in-Publication Data

World Health Organization.

Guiding principles for feeding infants and young children during emergencies.

1. Infant nutrition 2. Child nutrition 3. Nutrition disorders - prevention and control 4. Nutritional requirements 5. Emergencies 6. Guidelines
I. Title.

ISBN 92 4 154606 9

(NLM classification: WS 115)

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Designed by minimum graphics

Printed in France

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Acknowledgements

The World Health Organization gratefully acknowledges the contributions of the many organizations and individuals that commented on a review version of these guiding principles. The text has benefited greatly from practical experience-based suggestions from many sources, including: Children's University Hospital, Belgium; Commonwealth Department of Health and Family Services, Australia; Food and Agriculture Organization of the United Nations (FAO); Institute of Child Health, London; International Association of Infant Food Manufacturers (IFM); International Baby Food Action Network (IBFAN), Penang; International Lactation Consultant Association (ILCA); Makerere University, Uganda; Royal Tropical Institute, Australia; Tanzania Food and Nutrition Centre; Unit for Child Health, Uppsala University, Sweden; United Nations Children's Fund (UNICEF); United Nations High Commission for Refugees (UNHCR); World Food Programme (WFP); World Vision International; Wellstart International.

WHO acknowledges with all gratitude the substantial technical contribution and advice of Dr Ken Bailey (former WHO staff member) and Professor A. Ashworth-Hill, London School of Hygiene and Tropical Medicine. Special thanks are extended to Mr James Akaré, Dr Sultana Khanum, and Mrs Zita Weise Prinzo of the Department of Nutrition for Health and Development for their technical contribution, comments and advice throughout the finalization of the guidelines. Also acknowledged are contributions from Dr G.A. Clugston, Dr Barbara Reed, Ms Henrietta Allen, Mrs Randa Saadeh, Ms Catherine Melin, and input from the Department of Child and Adolescent Health.

The financial support of the Government of the Netherlands towards the development and publication of these guidelines is gratefully acknowledged.

Guiding principles for feeding infants and young children during emergencies

Breastfeeding

Principle 1

Infants born into populations affected by emergencies should normally be exclusively breastfed from birth to 6 months of age.

- 1.1 Every effort should be made to identify alternative ways to breastfeed infants whose biological mothers are unavailable.

Principle 2

The aim should be to create and sustain an environment that encourages frequent breastfeeding for children up to two years or beyond.

Breast-milk substitutes

Principle 3

The quantity, distribution and use of breast-milk substitutes at emergency sites should be strictly controlled.

- 3.1 A nutritionally adequate breast-milk substitute should be available, and fed by cup, only to those infants who have to be fed on breast-milk substitutes.
- 3.2 Those responsible for feeding a breast-milk substitute should be adequately informed and equipped to ensure its safe preparation and use.
- 3.3 Feeding a breast-milk substitute to a minority of children should not interfere with protecting and promoting breastfeeding for the majority.
- 3.4 The use of infant-feeding bottles and artificial teats during emergencies should be actively discouraged.

Complementary feeding

Principle 4

To sustain growth, development and health, infants from 6 months onwards and older children need hygienically prepared, and easy-to-eat and digest, foods that nutritionally complement breast milk.

Principle 5

Caregivers need secure uninterrupted access to appropriate ingredients with which to prepare and feed nutrient-dense foods to older infants and young children.

- 5.1 Adequate feeding of infants and young children cannot be assured if the food and other basic needs of households are unmet.
- 5.2 Blended foods provided as food aid, especially if they are fortified with essential nutrients, can be useful for feeding older infants and young children. However, their provision should not interfere with promoting the use of local ingredients and other donated commodities for preparing suitable complementary foods.
- 5.3 Complementary foods should be prepared and fed frequently, consistent with principles of good hygiene and proper food handling.

Caring for caregivers

Principle 6

Because the number of caregivers is often reduced during emergencies as stress levels increase, promoting caregivers' coping capacity is an essential part of fostering good feeding practices for infants and young children.

Protecting children

Principle 7

The health and vigour of infants and children should be protected so they are able to suckle frequently and well and maintain their appetite for complementary foods.

Malnutrition

Principle 8

Nutritional status should be continually monitored to identify malnourished children so that their condition can be assessed and treated, and prevented from deteriorating further. Malnutrition's underlying causes should be investigated and corrected.

- 8.1 Special medical care and therapeutic feeding are required to rehabilitate severely malnourished children.

The acute phase of emergencies

Principle 9

To minimize an emergency's negative impact on feeding practices, interventions should begin immediately. The focus should be on supporting caregivers and channelling scarce resources to meet the nutritional needs of the infants and young children in their charge.

Assessment, intervention and monitoring

Principle 10

Promoting optimal feeding for infants and young children in emergencies requires a flexible approach based on continual careful monitoring.

Foreword

When disaster strikes, whole communities – sometimes entire countries and regions – are thrown into disarray. In the emergency period that follows, lives are seriously disrupted. The infrastructure and social networks on which people usually depend are often badly weakened, completely destroyed or simply left behind.

Caring for populations during emergencies remains a global humanitarian priority of major proportions. Every year for the last quarter century some 150 million people worldwide have been affected by some type of emergency. Tens of millions have been forced to leave their homes to become part of some of the world's most destitute population groups, including:

- **internally displaced persons** who have been forced to relocate within their own territories or countries;
- **refugees** who have been forced to relocate across national boundaries;
- **returnees** – former refugees or internally displaced persons – who are attempting to reintegrate their communities and homes.

Emergencies following in the wake of natural or human-induced calamities – for example drought, floods, earthquakes, epidemics, agricultural and ecological catastrophes, war, civil unrest, and severe political and economic upheaval – dramatically change living conditions for entire communities. Families are left without shelter and the basic necessities of life. Those forced to migrate typically leave their assets behind, become separated from family and friends, and live among strangers in strange, often hostile, environments where familiar methods of coping may work only partially or not at all. Hardships resulting from migration and resettlement into crowded and unsanitary camps are physically and mentally draining. Further sapping morale are the combined impact of fear, uncertainty, losses – of family, friends, possessions and independence – and, all too often, a lingering threat of violence and death.

In 2004 alone, major emergencies affected nearly 40 million people, including 5.8 million children under the age of five, in 55 countries. The main causes of death among children during emergencies are the same as those occurring among otherwise disadvantaged populations, namely malnutrition, diarrhoeal diseases, acute respiratory infection, measles and malaria. How-

ever, emergencies distinguish themselves by their frequently soaring crude mortality rates, which can be two to 70 times higher than average. Experience shows that even in previously healthy populations, child morbidity and crude mortality rates can increase twentyfold in as short a period as two weeks. The best hope for averting the disability and death that are so common among children during emergencies is to ensure that they are adequately cared for and fed.

The guiding principles that follow have been prepared to help prevent this increased morbidity and mortality; they serve as a basis for action and are intended:

- to clarify that optimal practices for feeding infants and young children during emergencies are essentially the same as those that apply in other, more stable conditions;
- to inform decision-makers about the key interventions required to protect and promote optimal feeding for infants and young children that should be *routinely* included in any emergency relief response;
- to provide a starting point for organizing pragmatic, sustained interventions that will ensure optimal feeding and care for infants and young children during emergencies.

Since feeding infants and young children during emergencies is only one aspect of a broader survival strategy for entire populations, the guiding principles should be applied *flexibly* in conjunction with manuals, guidelines, training curricula, and other practical field-oriented documentation that treat in detail a variety of related topics. Examples of such documentation are provided in **Annex 1**.

The guiding principles are presented individually, under topical headings, together with an explanation of the significance of each, its implications during emergencies, and suggested action. Responsible governmental authorities and concerned international and nongovernmental organizations are encouraged to use the guiding principles when planning and implementing programmes to meet the nutritional needs of emergency-affected populations. Specifically, they should foster the optimal feeding and care of infants and young children by:

- protecting, promoting and supporting breastfeeding;
- ensuring that breast-milk substitutes are used safely, and only when strictly necessary;
- ensuring that older infants and young children receive sufficient energy and nutrients to meet their requirements for healthy growth, development and activity;

- promoting the physical and mental health of those who are responsible for feeding and caring for infants and young children;
- identifying and eliminating the underlying causes of sub-optimal feeding practices among infants and young children;
- treating those who are malnourished according to internationally recommended guidelines.

User feedback is welcome based on practical experience in applying these principles. Kindly address comments and suggestions to:

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Introduction

Meeting the specific nutritional requirements of infants and young children,¹ including protecting, promoting and supporting optimal feeding practices (**Annex 2**), should be a routine part of any emergency relief response. Indeed, it should be at the centre of efforts to protect the right of affected children to food, life and a productive future. As described in the *Global Strategy for Infant and Young Child Feeding*,² families in difficult circumstances require special attention and practical support to be able to feed their children adequately (**Annex 3**).

Malnutrition is a major threat to children’s lives during emergencies.

The mortality rate among under-five children is considerably higher than for any other age group. It is particularly high in emergency-affected populations due to the synergy of a high prevalence of malnutrition and increased incidence of communicable diseases. Even for children who are only mildly malnourished, the risk of death from a bout of illness is twice that of well-nourished children. The risk is greater still for those who are severely malnourished.

For those children who survive malnutrition, the enduring consequences include diminished quality of life and reduced productivity.

Malnutrition during the early years has a negative impact on cognitive, motor skill, physical, social and emotional development. The consequences of severe malnutrition effectively block the full realization of intellectual and physical potential for both current and future generations.

The fundamental means of preventing malnutrition in infants and young children is to ensure their optimal feeding and care.

Breast milk alone provides ideal nutrition for young infants,³ and it can also contribute significantly to the nutrition of older infants and young children.

¹ “Infants” are children under the age of 12 months and “young children” are between 12 and 36 months of age.

² *Global Strategy for Infant and Young Child Feeding*. Geneva, World Health Organization, 2002 (<http://www.who.int/nut/publications.htm#inf>).

³ “Young infants” are children under the age of 6 months.

Breast milk provides valuable protection from infection and its consequences, which is all the more important in environments lacking adequate water supply and sanitation. Indeed, during emergencies breast milk can make the difference between life and death.

Food other than breast milk benefits a child only if, in addition to relieving hunger, the food is safely prepared and fed and it contributes to meeting requirements for nutritional maintenance and growth by supplying energy, protein and key micronutrients such as iron, folate, calcium, zinc, and vitamins A, B and C.

The challenging conditions typically faced during emergencies, together with the weakening or dismantling of family and community structures, can undermine breastfeeding practice and interfere with crucial support for breastfeeding women.

Successful breastfeeding depends on frequent suckling, an abiding confidence among women in their ability to produce milk, and a supportive environment. During emergencies, physical and emotional stress can reduce women's confidence and diminish the capacity of other family members to help them. Traditional networks, through which knowledge has passed from caregiver to caregiver over generations, may no longer function. As families become separated and communities dispersed, key counsellors and other traditional participants in childcare may no longer be available. High demands placed on women's time and energy, reduced household size and loss of privacy are among the conditions that most directly threaten the frequency and duration of breastfeeding during emergencies – and thus the nutritional and health status of infants and young children.

The shortage – and often the unsuitability – of food resources during emergencies make essential aspects of feeding and care still more difficult.

Basic food aid commodities, whether because of their form or nutrient content, often fail to meet the specific nutritional needs of young children. Caregivers, with few resources at their disposal, may be unable to find ingredients for traditional recipes. Frequent infections and emotional stress, which are reflected in reduced appetite and poor eating behaviour, only compound the difficulty, in unfamiliar environments of locating, and preparing and feeding safely, foods that young children will eat. Many people who become caregivers during emergencies – for example fathers, grandfathers, older siblings, young mothers with newborn babies, and benevolent strangers – have never before looked after small children. Despite their best efforts to cope with their new responsibilities, they may fail to meet satisfactorily the nutritional needs of

children in their care. Frequent, safe food preparation and feeding are hampered by insufficient time and further complicated by lack of cooking utensils, fuel, soap and water.

Supplementary feeding programmes, by themselves, may not adequately prevent malnutrition.

When food is in short supply, supplementary feeding programmes can help offset the shortfall for all young children, malnourished or not. However, once general rations are adequate and their distribution well established supplementary feeding should no longer be necessary. Continued reliance on supplementary feeding programmes to reduce malnutrition suggests that underlying problems are being overlooked, and only postpones – or even prevents – identifying sustainable solutions.

Many malnourished children do not benefit from supplementary or – for the severely malnourished – therapeutic feeding programmes and thus remain vulnerable to the ravages of disease.

Many children do not benefit from feeding programmes because their nutritional status is not severe enough to make them eligible, or their eligibility is overlooked. For children whose moderate or severe malnutrition is recognized, caregivers might be unable to meet their special needs because participation in supplementary or therapeutic feeding programmes obliges them to devote time at the expense of other family members, or they may simply be unaware of malnutrition's dire consequences. Selective feeding as a curative measure for malnourished children can save lives. However, its purpose will be defeated if children simply return to the same damaging environment that initially caused the problem.

Breastfeeding



PRINCIPLE 1

Infants born into populations affected by emergencies should normally be exclusively breastfed from birth to 6 months of age.

Breast milk is the ideal food for the healthy growth and development of infants and young children and it protects them from infection and its consequences. While these advantages are relevant in all environments, they are all the more important for possibly malnourished children in the unhygienic conditions that often prevail during emergencies.

Protection is maximized during the first six months of life for the exclusively breastfed infant, who is thereby spared introduction of pathogens through contaminated foods or fluids. Moreover, breastfeeding's protective effect extends into the second and third years of life even if, by then, children are usually receiving most of their nutrition from other sources.

Moreover, during emergencies breastfeeding provides a privileged nurturing moment that is important for both mother and child. Breastfeeding enhances bonding, physical warmth and care, which are all crucial to ensuring child survival.

Breastfeeding also has an important contraceptive effect, giving mothers more than 98% protection from another pregnancy during the first six months after delivery provided mothers breastfeed frequently, day and night, and menstruation has not recommenced.

As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond. Exclusive breastfeeding is possible except for a few medical conditions, and unrestricted exclusive breastfeeding results in ample milk production.

Those responsible for promoting optimal child feeding during emergencies should immediately initiate action to encourage mothers at the time of delivery to feed only breast milk to their newborn infants; and to educate health and nutrition personnel, and other community workers, to protect, promote and support breastfeeding.

In environments where there is a high prevalence of human immunodeficiency virus (HIV) infection, the risk to infants of being infected with HIV through breastfeeding should be carefully weighed against the risk of their becoming seriously ill or dying from other causes if they are not breastfed (**Annex 4**).

1.1 Every effort should be made to identify alternative ways to breastfeed infants whose biological mothers are unavailable

A singular problem is posed during emergencies by the high proportion of infants and young children who stop breastfeeding early – that is before the age of two years – because of:

- illness, injury, incapacitation or death of their mothers;
- temporary or permanent separation from their mothers;
- early weaning for traditional or other reasons.

These children, as well as those who have never been breastfed, should still have breast milk in their diets if at all possible. To meet their needs, relactation and, if culturally acceptable, wet-nursing should be actively promoted, especially for infants under six months of age.

PRINCIPLE 2

The aim should be to create and sustain an environment that encourages frequent breastfeeding for children up to two years and beyond.

The premature cessation of breastfeeding is the most dangerous deviation from optimal feeding practices for infants and young children who live in the poor sanitary conditions that characterize emergency settlements, and who may already be sick or malnourished.

When complementary feeding begins, breast milk should still provide most of an infant's initial nutrition. However, even as the intake of other foods gradually increases and the proportion of nutrition supplied by breast milk decreases, it is desirable for the quantity of breast milk to remain the same, or even to increase, especially in view of the protection that it provides against infection.

Given the unreliability of food supplies during emergencies, breast milk can make an important qualitative and quantitative contribution to the diet, providing as much as half of a child's nutrient requirements between 6 and 12 months and up to one-third during the second year of life. Indeed, in some circumstances breast milk may well be a child's *only* sustainable source of food.

Factors affecting successful breastfeeding

A number of factors affect the successful initiation and establishment of breastfeeding, and thus the prospects for delayed weaning. Among the most important are:

Attitude

If a woman is convinced that breast milk is the best food she can provide her baby, she is inclined to breastfeed. Given appropriate educational and practical support, successful initiation is virtually guaranteed. However, special encouragement may be needed for women to sustain breastfeeding during emergencies. In principle, those with whom breastfeeding women live and interact most frequently are best able to provide encouragement and practical support.

Technique

While breastfeeding is a natural act, it is also a learned behaviour. In societies where breastfeeding is the norm, family members, friends and midwives typically share their knowledge and experience woman to woman. However, in emergencies many women find themselves separated from trusted advisers by distance or death. Expert help should be provided, for example at health facilities or by traditional birth attendants. The incidence of preterm births and low-birth-weight infants (<2500 g) often increases during emergencies. These newborns may not be strong enough to suckle with sufficient vigour to stimulate adequate milk production and intake. Mothers should be shown how to express their milk and feed it using an open cup.

Confidence

Only in cases of extreme deprivation will a mother's health or nutritional status seriously alter her ability to produce adequate amounts of high-quality milk. However, a woman's *perception* of reduced milk volume may prompt her to supplement prematurely her child's diet with other fluids or solids. Decreased milk production due to reduced suckling can transform an otherwise unjustified fear of insufficient milk into a practical reality. Nevertheless, anxiety and stress can genuinely interfere with milk let-down and ejection, making it difficult for a child to feed. Some women may wrongly interpret these changes as a sign of breast-milk insufficiency. They need reassurance that, with continued suckling, milk production and let-down will function normally.

Frequency

Emergencies can hinder frequent suckling, which is key to maintaining adequate breast-milk production. Household chores and income-generating activities compete with breastfeeding for women's time and energy. Similarly, relief activities that fail to take into account breastfeeding may also have a negative impact on suckling frequency. Reducing the workload of breastfeeding women, providing them with income-earning opportunities at home, and

decreasing unnecessary stress – for example by minimizing the time spent queuing for relief commodities or health services – help support frequent and sustained breastfeeding. Women should be encouraged to keep their babies next to them during the night so that they can easily breastfeed.

Health, nutrition and community-service workers have a central role to play in supporting breastfeeding. Their knowledge and attitudes are crucial in this regard, as are the accurate, consistent messages they provide mothers about breastfeeding. It is important that traditional practices incompatible with optimal breastfeeding – for example delaying breastfeeding initiation or discarding colostrum – are discussed. A written breastfeeding policy, in the language of the mothers served, can be useful in this connection; it should be routinely communicated to mothers and routinely referred to by all concerned.

Health, nutrition and community-service workers have a central role to play in supporting breastfeeding

- By participating in discussions and decisions about supporting women who are feeding infants and young children.
- By being knowledgeable about the need for exclusive breastfeeding for young infants, and sustained breastfeeding for older infants and young children.
- By speaking and acting in a manner that is consistent with this knowledge.
- By reinforcing messages about optimal breastfeeding during every contact with pregnant and lactating women.
- By being able to assist women in basic breastfeeding techniques or to refer them to someone who can.

Information and support for women and their families should be provided during pregnancy, and personnel attending women during this period should actively promote breastfeeding consistent with the *Ten steps to successful breastfeeding* (Annex 5). If there is no opportunity for detailed discussions with health professionals, trained lay counsellors can be placed in health clinics to organize small discussion groups.

Emergencies pose serious challenges to the health of mothers and children alike. It is thus important that mothers are advised to maintain breastfeeding frequency even when they are ill, and to increase frequency during and after periods when their children are ill. Mothers should be reassured that milk quality is unchanged during illness, and that it is not the cause of their child's illness.

Other breast-milk feeding options

Relactation

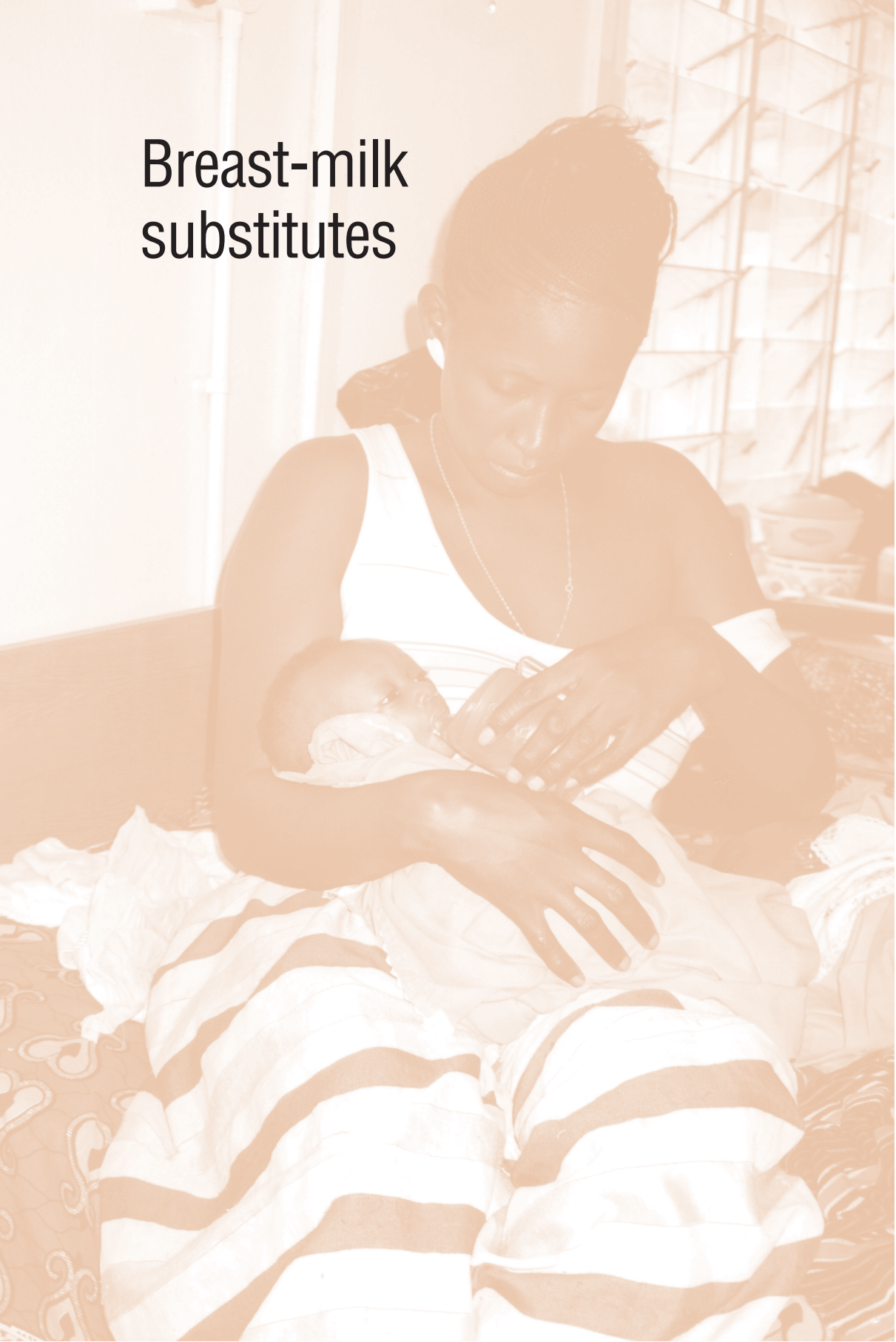
If breastfeeding is interrupted – for example due to illness or temporary separation – mothers should be helped to re-establish it if they wish. Organizing and assisting mothers to relactate requires specialist knowledge and experience. It is thus advisable that at least one member of the emergency management team be trained to take responsibility in this connection.

Relactation is a common practice in many traditional societies, and relevant expertise in the affected or surrounding communities should not be overlooked. A woman wishing to relactate has the same nutritional needs as a normally lactating woman but may require additional practical support. Her confidence in her ability to produce adequate amounts of milk will largely determine the diligence and success of her efforts to do so. Food supplements may be helpful, especially if her nutritional status is poor.

Wet-nursing

In the absence of a biological mother, the placement of a child with a healthy wet-nurse can be facilitated, limited to a degree, or hindered entirely depending on attitudes in a given culture towards women breastfeeding children who are not their own. Consequently, careful investigation – and possibly some negotiation – may be required before such a programme can be established. Meanwhile, children under six months of age will have to be fed with a suitable breast-milk substitute (**Principle 3**) and older infants and young children with nutritionally balanced foods.

Breast-milk substitutes



PRINCIPLE 3

The quantity, distribution and use of breast-milk substitutes at emergency sites should be strictly controlled.

Emergencies do not justify routine distribution and use of breast-milk substitutes. On the contrary, prevailing conditions tend to aggravate the already significant health risks associated with artificial feeding.

Planners and managers of emergency relief operations should resist superficially attractive quick-fix “solutions” that can result in widespread, unnecessary and potentially harmful distribution of infant formula and other prepared foods that are used as breast-milk substitutes. Negative effects can extend beyond the target population to surrounding communities as these products find their way into local markets.

Offers of well-meant but ill-advised large-scale donations of “baby foods” and feeding bottles should be refused. Awareness should be raised about the general unsuitability of providing breast-milk substitutes in emergency settings. This can be done via the mass media in food-donor countries, in training sessions for relief-programme planners, managers and field staff, and in information provided to governments, agencies and groups contributing relief supplies.

Infants who are not breastfed should receive special attention since they constitute a risk group. Their vulnerability only increases – often with disastrous consequences – during emergencies.

3.1 A nutritionally adequate breast-milk substitute should be available, and fed by cup, only to those infants who have to be fed on breast-milk substitutes

Generally speaking, only limited quantities of a nutritionally adequate breast-milk substitute¹ are required for infants – the target group should be those under six months of age – that do not have access to breast milk.² To meet these infants’ needs when a mother or wet-nurse are relactating or temporarily incapacitated, or when a wet-nurse cannot be identified, it is necessary to provide a breast-milk substitute:

- that is formulated in accordance with relevant Codex Alimentarius standards,

¹ An average daily ration of approximately 110 g (or 3.3 kg per month) of a bona fide infant formula is required to meet an infant’s nutritional needs during the first six months of life. This figure does not take into account possible wastage during transport and preparation.

² For infants from 6 months onwards and older children who are not breastfed, see: *Feeding the non-breastfed child 6 to 24 months of age*, Geneva, 8 to 10 March 2004: <http://www.who.int/child-adolescent-health/nut.htm>

- that bears only a generic label conforming to relevant provisions of the International Code of Marketing of Breast-milk Substitutes (**Annex 6**).

For populations lacking a breastfeeding tradition, the need for breast-milk substitutes may be greater at the start of an emergency. Ideally, however, general distribution will be a short-term measure only lasting no more than, say, six months. Preparations for a shift away from breast-milk substitutes should include:

- active breastfeeding promotion,
- encouragement and support of mothers at delivery so that all newborns are breastfed,
- promotion, where culturally acceptable, of wet-nursing and relactation.

3.2 Those responsible for feeding a breast-milk substitute should be adequately informed and equipped to ensure its safe preparation and use

A fundamental risk in using breast-milk substitutes stems from their inappropriate preparation and unsafe feeding. Their distribution and use should thus be carefully supervised at every step and accompanied by:

- a demonstration of how to prepare and feed the substitute safely using an open cup;
- provision of a suitable cooking pot to prepare the substitute, and an open feeding cup;
- adequate amounts of clean water and cooking fuel for frequent preparation;
- a warning about the health hazards of inappropriate preparation and unsafe feeding.

Health services should be prepared to treat the higher infection caseload, and especially the diarrhoea, which can be expected as a result of feeding breast-milk substitutes. To this end, donors supplying breast-milk substitutes could be asked to contribute to the strengthening of health services, and to the provision of open feeding cups and clean water and fuel.

3.3 Feeding a breast-milk substitute to a minority of children should not interfere with protecting and promoting breastfeeding for the majority

Caregivers for infants who have to be fed on a breast-milk substitute should receive instructions individually on appropriate preparation and safe feeding. However, this should not be done in the presence of breastfeeding mothers and children.

3.4 The use of infant-feeding bottles and artificial teats during emergencies should be actively discouraged

Feeding bottles and teats are difficult to keep clean and their use significantly increases the risk of diarrhoea, dehydration and malnutrition. This is true even in supervised feeding in institutional settings, for example orphanages. Feeding bottles and teats should thus not be distributed during emergencies, and their use should be actively discouraged through education and training (*see also Annex 7*).

Complementary feeding



PRINCIPLE 4

To sustain growth, development and health, infants from 6 months onwards and older children need hygienically prepared, and easy-to-eat and digest, foods that nutritionally complement breast milk.

Children's daily nutritional requirements per unit of body weight are higher during the first two years of life than at any other time. After the period of exclusive breastfeeding (**Principle 1**), to meet their evolving nutritional requirements infants should receive, in addition to breast milk, a variety of locally available and safely prepared complementary foods rich in energy and micronutrients.

These general considerations (**Annex 8**) assume still greater significance during emergencies – especially the acute phase – if, as is so often the case:

- only very dilute porridge is fed,
- available foods are coarse and difficult to prepare in a soft, semi-solid form,
- environmental conditions make safe food preparation and feeding difficult.

Foods for older infants and young children

A food is appropriate for older infants and young children if it:

- contributes to overall healthy nutrition,
- is easy to chew and digest,
- appeals to them,
- helps prepare them gradually to accept the usual family diet,
- is safely prepared and fed.

Appropriate complementary foods, provided *together* with breast milk, will ensure healthy nutrition for older infants and young children through the second year of life and beyond. While breast milk is a complete food only for the young infant, it can still make an important contribution to overall nutrition in addition to protecting against infection (**Principle 2**).

Caregivers should be helped to provide complementary foods that are rich in energy, protein, and micronutrients such as iron, zinc, calcium, vitamin A, vitamin C and folate. When choosing foods for special distribution, consideration should be given to animal products or fortified food rations, which provide adequate amounts of iron, zinc and calcium.

Complementary foods are usually prepared as soft, easy-to-eat porridge and as nutrient-dense snacks, for example banana, avocado, or the usual family foods that have been mashed or strained to make them easier to eat. Simple

soft mixtures of typical food aid commodities, for example cereals, pulses, fortified blended foods, oil and sugar, together with a variety of vegetables and fruits can provide a nutritionally suitable complement to breast milk.

As children grow and develop, these foods gradually make up a larger part of the diet until they no longer complement breast milk but supply the bulk of children's nutritional needs. At this stage, breast milk's most important contributions are protection against disease and nourishment during periods of illness or food shortage. Meanwhile, the very act of breastfeeding continues to provide comfort and security.

Special problems

Adjusting to change

The traditional foods that caregivers would normally feed to older infants and young children may not be available during emergencies, and the foods that are available may be unfamiliar. While struggling to satisfy hunger, caregivers may fail to meet children's full nutritional needs due to lack of basic nutrition knowledge or unfamiliarity with local foods. Further complicating matters, typical basic food aid commodities – for example cereals, pulses and oil – do not, by themselves, readily meet the nutritional needs of young children.

All caregivers need to know:

- the extent to which the food aid commodities they are receiving meet the nutritional needs of infants and young children,
- which locally available foods are especially rich in the essential nutrients that are missing in food aid commodities.

As a practical step, nutritionists can work with caregivers from the affected community to devise recipes based on food aid commodities and inexpensive locally available foods. For displaced populations in particular, the advice of local women can be invaluable for learning about indigenous foods and preparation techniques.

Different recipes may be needed for changing seasons and conditions. Recipes can be shared during public demonstrations, which can also serve as forums for discussing food acquisition, problems faced and how to overcome them, and safe food preparation and safe feeding.

Inexperienced caregivers

People who are assuming responsibility for, but are unfamiliar with, feeding infants and young children – for example fathers and grandfathers, older siblings, new mothers, and sympathetic strangers – require minimum basic information and support to succeed.

Inexperienced caregivers need basic information about the dietary needs of

infants and young children, safe food preparation, and safe and frequent feeding. They can benefit from help and encouragement offered by health workers or other home visitors, more experienced caregivers and mutual support groups.

Factors related to children

Common factors that can reduce a child's appetite, or lead to a refusal to eat, during emergencies include:

- Anxiety in the child or caregiver
- An abrupt change in diet
- Illness, for example diarrhoea, fever, and respiratory or parasitic infections
- A monotonous diet

It is important to reduce the impact of special problems, or resolve them altogether. Offering children tasty, easy-to-eat foods in an emotionally stable environment will do much to lessen the immediate danger of malnutrition.

Feeding frequency

In addition to being frequently breastfed, because of their limited food-intake capacity infants from 6 months onwards and older children need to be given semi-solid foods often.

Planners and managers can facilitate frequent feeding in a variety of ways. Besides alerting caregivers to the need for frequent feeding, other constraints need to be taken into consideration when planning interventions, including:

- Time required for food preparation and feeding
- Material barriers, for example lack of fuel and cooking utensils
- Dangers of storing prepared food

Frequent feeding can be facilitated by:

- Increasing fuel availability and conservation
- Providing cooking utensils
- Making snacks available that require little or no cooking
- Encouraging income-generating preparation and sale of snack foods
- Encouraging caregivers to group themselves for food preparation

Child/caregiver interaction

Children who are stimulated through creative play grow and develop faster than children with similar diets who lack stimulation. Given the stress and demands placed on caregivers during emergencies, there may be little time to play with small children; and even when there is time, adults, who are themselves often depressed, may well be disinclined to provide this opportunity.

Organizing play groups and training supervisors for this purpose can serve as an effective additional way to protect and improve the nutritional status of children during emergencies.

PRINCIPLE 5

Caregivers need secure uninterrupted access to appropriate ingredients with which to prepare and feed nutrient-dense foods to older infants and young children.

Adequate food availability for small children should be among the explicit considerations at every step of the planning and management of emergency resources. This includes ensuring that:

- Food aid is carefully planned and distributed
- Emergency settlements are within reach of local markets
- Good relations are maintained with local populations, especially food producers, employers and merchants
- Income-generating activities, family gardens and animal husbandry are undertaken wherever possible

5.1 Adequate feeding of infants and young children cannot be assured if the food and other basic needs of households are unmet

Failure to ensure adequate food for households presents a dual threat. Not only is this likely to decrease children's food intake directly; it is also apt to do so indirectly since food acquisition competes with childcare and feeding for caregivers' scarce time and diminished energy. If basic food needs are not being met, those responsible for promoting optimal child feeding should consider how caregivers can acquire food for the household without increasing risks to children.

Continual monitoring of food distribution, household food reserves, and food preparation and feeding is important to prevent problems. If general household needs have been theoretically met but there is still evidence of food insecurity, the underlying reasons should be identified. Significant non-food needs, theft or corruption, inequitable food distribution, intolerance of distributed food, and difficulties associated with food preparation and feeding should be dealt with as a first priority.

Commodities found in the typical food aid basket frequently require extensive cooking before they can be fed to children, and sufficient attention is not always given to calculating for all essential nutrients. Historically, emphasis has been on meeting energy and protein needs during emergencies, and the

exclusive consumption of food aid commodities has resulted in vitamin and mineral deficiency diseases. While these diseases affect entire populations, infants and young children quickly suffer the most severe consequences.

Minimum requirements for food aid baskets

- Adequate in amount, taking into account milling losses, payment in kind for milling and degree of recipients' self-sufficiency
- Nutritionally balanced, culturally acceptable and safe for human consumption.
- Easy to cook, using minimum fuel
- Easy to digest for children and other vulnerable groups
- Supplied regularly and on time
- Distributed in a way that all who are eligible actually receive their entitlement

General food aid

General distribution should provide enough food to maintain the health and nutritional status of affected populations, in anticipation of their return to a normal post-emergency way of life.

If a population is entirely dependent on food aid, the general ration should provide a minimum intake calculated on the basis of 2100 kcal per person per day. The energy content of rations for a given population will vary according to body size, activity level and the proportion of adults. If a population is frankly malnourished, exposed to cold or engaging in moderate-to-heavy physical activity, the basic ration should be increased.

It is important to provide culturally acceptable and easy-to-use food commodities. Adults faced with unfamiliar foods will be reluctant to feed them to their children. Conversely, introducing exotic foods may only create later difficulties, for example during a temporary interruption in food aid or in post-emergency settings when food aid has ceased.

In choosing which food aid commodities to distribute, careful consideration should be given to their potential negative impact on local markets.

Using general food aid commodities to feed older infants and young children

Food aid baskets should take into account children's nutritional needs and include ingredients, for example sugar, which help make food palatable to this age group. General-distribution food aid commodities provided by the World Food Programme usually include cereals, pulses, edible oils, and often forti-

fied blended foods.¹ When properly prepared, these foods can contribute to meeting the nutritional needs of older infants and young children. However, they need to be combined with other ingredients to achieve satisfactory nutrient density.

- **Cereals** are the primary source of energy in the typical food aid basket, but most require milling before they can be distributed for child feeding. Alternatively, assistance with milling after distribution should be ensured. In case of milling by hand-pounding, which results in substantial losses, ration size should be increased accordingly.
- **Pulses**, for example dried beans, peas, lentils and groundnuts, are important for young children because of their protein and micronutrient content, particularly B vitamins (thiamine, riboflavin, niacin). Unfortunately, they usually require lengthy cooking, which poses a problem in case of fuel scarcity. Consumption of partially cooked pulses can cause digestive problems and thus have a negative impact on their acceptance.
- **Oil** is useful in foods for children because it is a concentrated form of energy; when fortified, it can also provide essential vitamins, especially vitamin A. Moreover, fat is necessary in the diet to ensure absorption of fat-soluble vitamins from other foods. However, in some cultures oil is not an acceptable ingredient in foods for small children.

Possible inadequacies in general food aid commodities

When the food provided is neither nutritionally varied nor easy to cook, serious micronutrient deficiencies can occur, especially during prolonged emergencies. Inadequate iron intake, the effects of malaria and intestinal parasitic infections, and low pre-emergency iron stores result in a high prevalence of anaemia in many populations. Typically, half the women and young children are anaemic. Although pulses contain iron, its bioavailability is low. Anaemia related to iron deficiency can be prevented and controlled by providing iron supplements to vulnerable groups.²

Iodine deficiency can be prevented by using iodized salt. Deficiencies of vitamins A and C are common during emergencies where the affected population does not have access to fresh vegetables, fruits or tubers. Vitamin A deficiency can be prevented by distributing a fortified food for children, or by

¹ UNICEF/UNHCR/WFP/WHO. *Food and nutrition needs in emergencies*. WFP, Rome, 2002.

² *Iron deficiency anaemia. Assessment, prevention and control. A guide for programme managers*. Geneva, UNICEF/UNU/WHO, 2001 (document WHO/NHD/01.3).

providing high-dose vitamin A supplements.¹ Adequate intakes of other micronutrients such as zinc and calcium cannot be assured if there are no fortified commodities in the food basket.

5.2 Blended foods provided as food aid, especially if they are fortified with essential nutrients, can be useful for feeding older infants and young children. However, their provision should not interfere with promoting the use of local ingredients and other donated commodities for preparing suitable complementary foods.

Blended foods

To improve the value of food aid for infants and young children, blended foods – cereal and pulse meals combined to provide complete protein and fortified with vitamins and minerals – should be included in general food distribution, especially when access to fresh foods is limited.² Given their nutrient density and ease of preparation, blended foods prepared as porridge make a good complementary food for older infants.

However, since many of the blended foods currently distributed during emergencies were never intended to serve as children’s *sole* complementary food, caregivers should be helped to provide other foods. As with any food aid commodity, delivery of blended foods is subject to interruption. In any case, given that blended foods will not normally be available once an emergency has passed, caregivers should be prepared to cope without them.

To help ensure their appropriate allocation within households with small children, caregivers should be informed of these commodities’ special value, the quantity required to meet children’s nutritional needs, and any nutritional shortfalls and how to compensate for them.

Blended foods can also greatly improve the nutritional status of pregnant and lactating women, thereby providing direct benefit to their children as well.

In insecure environments, blended foods present the added advantage of being of low “lootable” value, and are thus more likely to be consumed by the intended recipients.

¹ *Vitamin A supplements. A guide to their use in the treatment and prevention of vitamin A deficiency and xerophthalmia.* WHO/UNICEF/IVACG Task Force. 2nd edition. Geneva, WHO, 1997.

² UNICEF/UNHCR/WFP/WHO. *Food and nutrition needs in emergencies.* WFP, Rome, 2002.

Distribution of special commodities

Fresh commodities like fruits, vegetables, meat and fish, which are occasionally available during emergencies, are valuable for supplying older infants and young children with a variety of vitamins and minerals. Those responsible for overseeing child feeding should ensure that such foods, if available, are distributed to help prevent micronutrient malnutrition.

Fresh and powdered milk (whole or skim) are good sources of high quality protein and, when fortified, of vitamin A. However, because unpasteurized fresh milk, or improperly prepared or diluted powdered milk, can be a serious health hazard, their distribution and use should be closely supervised. Fresh milk should be brought to a boil before being used and powdered milk should be prepared and fed safely.

Any milk distributed during emergencies is potentially disruptive of breastfeeding. Those responsible for overseeing child feeding should thus counsel mothers and other family members about the appropriate use of milk, and ensure that it is not used as a breast-milk substitute.

Milk powder should never be distributed alone, but as part of a dry take-away ration that has been premixed with a suitable cereal flour, or in supervised on-site feeding.

The policy of the United Nations High Commissioner for Refugees related to the acceptance, distribution and use of milk products in feeding programmes in refugee settings should be carefully followed (**Annex 9**).

Caution: Unmodified animal milk should not be given to children under 6 months of age!

Supplementary food distribution

The aim of supplementary food distribution – usually in the form of a dry take-home ration including specific nutrients via a fortified food – is to meet the nutritional needs of vulnerable groups, for example under-five children and pregnant or lactating women. The typical dry supplement for young children provides 1000–1200 kcal/day, which takes into account sharing with other household members. If, exceptionally, the special ration is provided via on-site cooked meals, the usual amount is 500–700 kcal/day per child.

Supplementary food distribution is no more than a temporary safety net when a general ration is inadequate. It is not meant to compensate over the long term; rather the general ration should be improved. Once household food security has been achieved, any persistent malnutrition among children should immediately prompt a search for underlying causes and their elimination.

When supplementary feeding programmes are implemented (*see Annex 10* for a suggested framework for this purpose), the population as a whole should be informed of their intent and encouraged to ensure that food reaches

the targeted needy groups. Involving the community in identifying which groups to target should enhance these programmes' success.

Food from other sources

Household food production

Fresh foods are not only rich in vitamins and minerals, but they also cook quickly into a soft and easily fed and digested form. Conditions at the emergency site – for example land availability, soil quality, and access to seeds, water and tools – will help determine the degree to which household food production can contribute to meeting nutritional needs during emergencies.

When planning emergency settlements, every effort should be made to maximize the potential for food-crop cultivation. For example, it might be helpful to foster links between the emergency-affected population and local farmers and agronomists, who can advise about appropriate varieties and planting methods. If space for planting is limited, priority should be given to households with children.

Small-animal husbandry can be useful given its potential for adding eggs and meat to children's diets, or for generating income with which to purchase other food. Animals should be tended in ways that do not compromise the hygiene of the children's immediate environment.

Purchase and barter

If markets are operating in the vicinity of emergency settlements, every effort should be made to ensure accessibility for households with children. This may require negotiation with local authorities, especially in the case of displaced populations, and steps to ensure safe travel. Vendors can also be encouraged to visit emergency settlements. To benefit fully from market access, those responsible for promoting optimal child feeding should:

- determine what produce is available in local markets and its cost;
- discuss with responsible household members their preferred purchases of complementary foods, according to nutrient density, for older infants and young children.

However, even when markets are theoretically accessible, a large proportion of the affected population may not have the necessary financial and logistical means to take full advantage. Those responsible for fostering optimal child feeding should identify households having difficulties and target their interventions to improve this group's access. Encouraging income-generating activities in households with young children can increase purchasing power.

Where earning capacity is low, food aid recipients sometimes resort to selling commodities to obtain foods that they believe will better meet their chil-

dren's nutritional needs. This becomes a problem only when the sale or exchange of food results in a significant loss of energy, protein or essential nutrients.

Those responsible for monitoring infant and young child feeding practices should be aware of common trades, evaluate their nutritional value or cost, and provide advice accordingly. This information also provides valuable feedback for the World Food Programme, the United Nations High Commission for Refugees and other agencies responsible for providing or channelling food aid, since it permits informed decisions about future food aid deliveries.

Natural food collection

Foods growing wild may also be suitable for feeding young children. Local populations can facilitate their use by providing information on their nutritional value, and tips on finding and preparing them. There might also be opportunities for fishing or hunting, although the legal and environmental implications should be determined before advising households in this regard.

5.3 Complementary foods should be prepared and fed frequently, consistent with principles of good hygiene and proper food handling

Safe food, safe feeding

The unhealthy environmental conditions and lack of safe water and sanitary facilities that characterize emergencies greatly increase the risk of foodborne disease. The negative impact of foodborne disease on children's nutritional status and overall health cannot be overstated. Every effort should be made to ensure that foods for children, particularly the very young, are safely prepared and fed.

Community information campaigns should emphasize basic messages about safe food storage, preparation and feeding. Information should be accompanied by measures to ensure that minimum resources are available to comply with the messages given.

Emphasis should be on creative solutions which caregivers and household members can undertake on their own or in partnership with others. Traditional crafts (for example pot- and basket-making) and technologies (for example fermentation) can help, although necessary supplies – including fuel and utensils – may be difficult to obtain. Coordination with other community or special-group activities may be helpful in this connection.

The practice of active feeding – supervised feeding by an adult or responsible older child until the child has had enough to eat – reduces the risk of contamination and food losses while ensuring that young children receive an adequate share of household food.

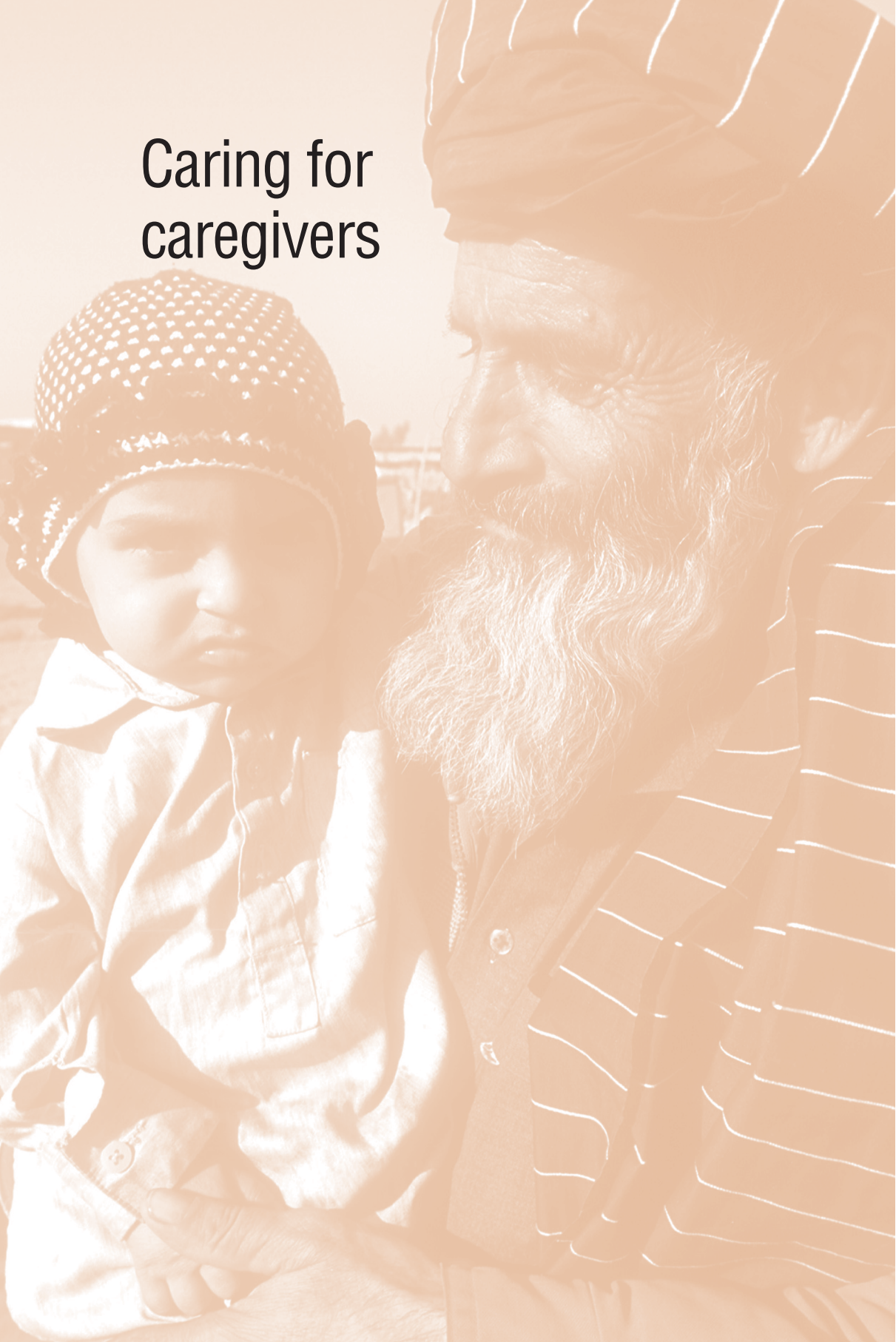
Basic messages to ensure safe food and safe feeding

- Store uncooked food in a safe, dry place.
- Protect food from insects, rodents and other animals.
- Avoid contact between raw foodstuffs and cooked food.
- Keep areas where children are fed or play free of animal and human faeces.
- Keep all food preparation premises clean.
- Wash hands before preparing food or feeding children.
- Wash cooking utensils.
- Wash fruits and vegetables.
- Use clean water.
- Cook food thoroughly.
- Avoid storing cooked food; instead, prepare food often.
- If cooked food is saved, keep it as cool as possible.
- If previously cooked food is to be eaten, reheat it thoroughly before serving.
- Wash the child's hands before feeding.
- Use open feeding cups.
- Feed actively, that is supervise the child and continue offering food until the child has enough.

Minimum resources required for safe food and safe feeding

- Fuel
- Clean water
- Soap
- Time for frequent food preparation, feeding and cleaning up
- Utensils for cooking and feeding
- Containers for:
 - transporting food and water to shelters
 - storing water at shelters
 - protecting storage of uncooked foods
 - protecting storage of cooked foods

Caring for caregivers



PRINCIPLE 6

Because the number of caregivers is often reduced during emergencies as stress levels increase, promoting caregivers' coping capacity is an essential part of fostering good feeding practices for infants and young children.

All caregivers

The health and nutritional status of caregivers should be ensured for their own sake and to enable them to fulfil their responsibilities on behalf of children. Their physical safety should also be provided for while they carry out their daily tasks. Caregivers themselves require emotional security if they are to contribute to creating an environment that will promote children's healthy growth and development, and prevent anxiety that could lead to eating disorders.

Assistance should be organized to the extent possible from the perspective and to the advantage of the user and not the provider or the supervisor. To ease the time constraints women and other caregivers face, it is useful to:

- Organize efficient food distribution
- Establish effective water collection and distribution
- Supply fuel for families with small children or other vulnerable members
- Provide foods that cook quickly using minimal fuel
- Furnish easily accessible and affordable grain-milling facilities
- Involve in decision-making those directly affected by emergencies
- Promote the establishment of self-help groups and support their activities

Households with only one adult

Given the inherent dangers and hardships of emergencies, a significant proportion of households with infants and young children – excluding those with handicapped or elderly members – may include only one, or possibly no, able-bodied adult. These households face particular difficulties in feeding infants and young children because of:

- Limited mobility due to childcare responsibilities
- Lack of time both to earn money and to assume domestic responsibilities
- Difficulty in achieving self-sufficiency
- Absence of help in locating suitable shelter
- Concern for physical and material security

Given such pressures, affected households are at high risk of disintegration while the young children in them face a high risk of neglect or even abandonment. These households can benefit directly from practical help and encouragement from neighbours and the community as a whole through:

- Cooperative childcare arrangements and childcare centres
- Help with household tasks from neighbours and community associations
- Self-help groups

In households where the only adult is not the mother of a young infant, alternative breastfeeding arrangements should be made if possible (**Principle 2**). Counselling on appropriate child feeding is all the more important in instances where the adult has never before assumed responsibility for childcare.

Women with children living on their own may have difficulty protecting their entitlements. They are often found at the end of allocation queues for food, shelter and other basic needs, and they can quickly become targets of theft and coercion. Including women in planning and implementing general assistance, giving “queuing priority” to women who are on their own, and monitoring closely the distribution of aid and services on their behalf can improve their access to services.

Establishing residential centres for single-adult households can provide both physical security and opportunities for cooperative childcare, income generation, skill training and other basic services.

Meeting women’s special needs

Pregnant and lactating women have special nutritional needs. Additional food for pregnant women should usually be supplied as a take-home ration or, exceptionally, provided on site. Where lactating women are concerned, a ration card for the newborn should be immediately issued and held by the child’s mother. It should be made clear that the extra food is intended exclu-

Pregnant and lactating women have special nutrition needs

Pregnant women

- Need an additional 300 kcal/day (normally provided by the general food ration)
- If malnourished, need an additional 500 kcal/day
- Should receive iron and folate supplements
- Should receive chemoprophylaxis for malaria in endemic areas

Lactating women

- Need an additional 500 kcal/day (normally provided by the general food ration)
- If malnourished, need another 500 kcal/day
- Should receive sufficient fluids, taking into account activity and temperature

sively for the mother during the first six months of her child's life. Thereafter, it may be shared with the child.

Information made available to households and the community should include specific messages about the special nutritional needs of pregnant and lactating women and why they are being provided extra food.

Pregnant women should be provided appropriate prenatal, delivery and postnatal care, including vitamin and mineral supplements.

Rape prevention and response

Rape prevention should be a routine part of emergency intervention. Women and young girls, including those who are disabled, require special protection, all the more so since they frequently have little or no voice in their own defence.

Widespread rape may have been a part of the events leading up to a full-scale emergency. If so, preparations should be made for the birth and care of potentially large numbers of children conceived as a result.

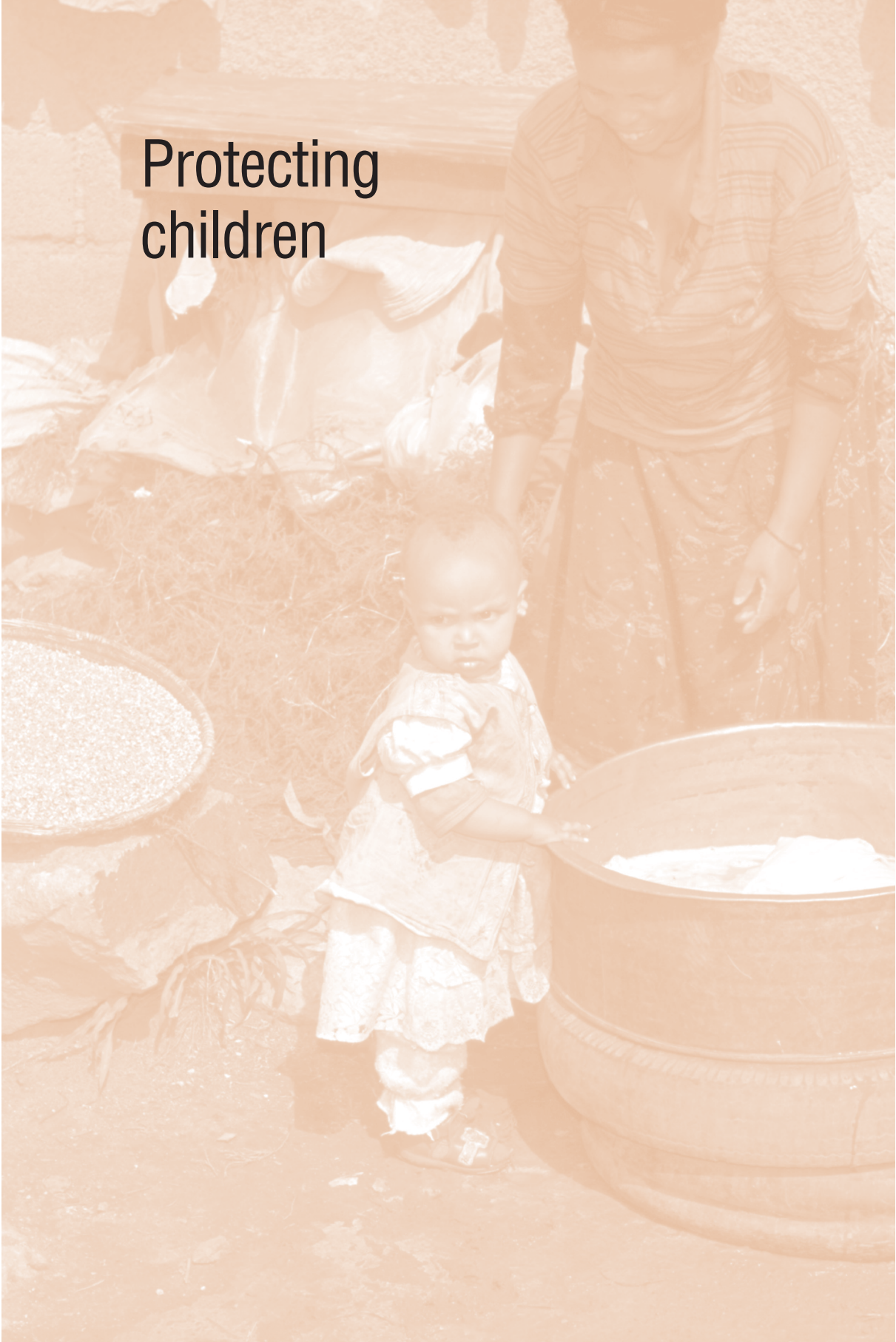
Counselling should be provided during pregnancy in an effort to prevent child abandonment even as preparations are made to deal with this possibility. If it appears likely that mothers will not care for their children, alternative arrangements should be made in advance.

Adolescent pregnant women are at increased risk for preterm delivery (<37 weeks). Those who might have lost the support of family and community, require special assistance.

Other trauma

Extreme emotional trauma among caregivers can be particularly incapacitating in emergencies. Those affected may be unable to continue looking after children, or be limited in their capacity to perform child-feeding tasks reliably. To find solutions, those responsible for promoting optimal infant and young child feeding should coordinate with those whose job it is to counsel and care for trauma victims.

Protecting children



PRINCIPLE 7

The health and vigour of infants and children should be protected so they are able to suckle frequently and well and maintain their appetite for complementary foods.

The prenatal and postpartum periods

Prenatal care, dietary supplementation with iron and folate, and food supplements providing additional energy serve to protect mothers and children alike. Mothers with inadequate energy intake, especially during the last trimester of pregnancy, or who are anaemic are more likely than healthy mothers to give birth to low-birth-weight babies who are at higher risk of illness and death.

If a mother is seen early in pregnancy, body mass index (BMI) can be used as an indirect indicator of adequate nutrient stores. If a mother is not seen early, attained maternal weight is the preferred risk indicator.

Extra food should be provided to all pregnant women (*see Principle 6*) as a form of supplementary feeding, usually together with a daily iron supplement (60 mg elemental iron in the form of ferrous sulphate together with 400 µg folic acid).

All lactating women should also receive extra food up to six months postpartum; in addition, they should be given a daily 60 mg dose of element iron together with 400 µg folic acid and 200 000 IU vitamin A within eight weeks of delivery.

Illness

To prevent debilitating nutritional consequences, infants and young children should be actively protected from infection by promoting:

- Breastfeeding
- Nutritionally adequate and safe complementary feeding
- Immunization
- A clean environment
- Protection from disease vectors, for example mosquitoes
- Curative care

Immunization, curative care and sanitation typically fall outside the scope of child-feeding programmes. During emergencies, however, it is essential that all three are fully integrated in any organized response to meeting the nutritional needs of infants and young children. Success depends on good communication among concerned programmes and staff to ensure coordination and complementarity.

The physical environment

The risk of hypothermia among newborns is highest at birth and remains high during the first week of life. The risk is particularly important among preterm and low-birth-weight infants, but the danger is real for all newborns when the temperature falls below 20 °C.

Mothers should be encouraged to keep their newborns in close body contact as much as possible. Skin-to-skin contact offers valuable protection for the most vulnerable preterm and low-birth-weight infants.

Frequent breastfeeding from birth reduces the danger of hypothermia and helps prevent both hypoglycaemia (to which severely malnourished children are especially prone) and physiological jaundice. Inadequate protection from adverse climatic conditions increases children's nutritional needs while possibly reducing their appetite. Priority considerations in this connection include:

- providing adequate shelter and covering, for example blankets and suitable clothing,
- protecting caregivers and children while they queue for food or services and perform household and income-generating tasks, for example cultivation, and fetching water and fuel.

Malnutrition



PRINCIPLE 8

Nutritional status should be continually monitored to identify malnourished children so that their condition can be assessed and treated, and prevented from deteriorating further. Malnutrition's underlying causes should be investigated and corrected.

Caregivers, community health workers, home visitors, and other persons who circulate frequently among the shelters and homes of affected populations should be:

- Aware of the dangers of malnutrition and why it is essential to follow up on cases
- Able to recognize malnutrition's early signs
- Know how to identify malnutrition's underlying causes, for example infectious diseases
- Equipped with appropriate information for reporting, referral and follow-up
- Able to recognize poor feeding practices and prepared to advise caregivers on their improvement, for example by demonstrating safe food preparation and feeding

8.1 Special medical care and therapeutic feeding are required to rehabilitate severely malnourished children

Therapeutic – that is to say curative – feeding with appropriate supplements is required for severely malnourished children¹ or children who have symmetrical oedema involving at least the feet. These children need intensive day-and-night treatment in a therapeutic feeding centre, which also provides an opportunity for frequent breastfeeding and, if appropriate, relactation. Severely malnourished children with no medical complications or oedema can be treated in their homes using a non-centre-based approach in the rehabilitation phase.²

Preventing deaths among severely malnourished children, especially during an emergency's early stages, depends on rapidly sizing up needs, providing supplies and starting treatment. The specific treatment regimen, which is a medical intervention, is described elsewhere.³ The failure of children to re-

¹ Defined as children having weight-for-height -3 SD below the median National Center for Health Statistics/WHO reference value.

² ENN Report on the Proceedings of an Inter-agency Workshop. *Community Based Approaches to Managing Severe Malnutrition*. Dublin, 8–10th October 2003.

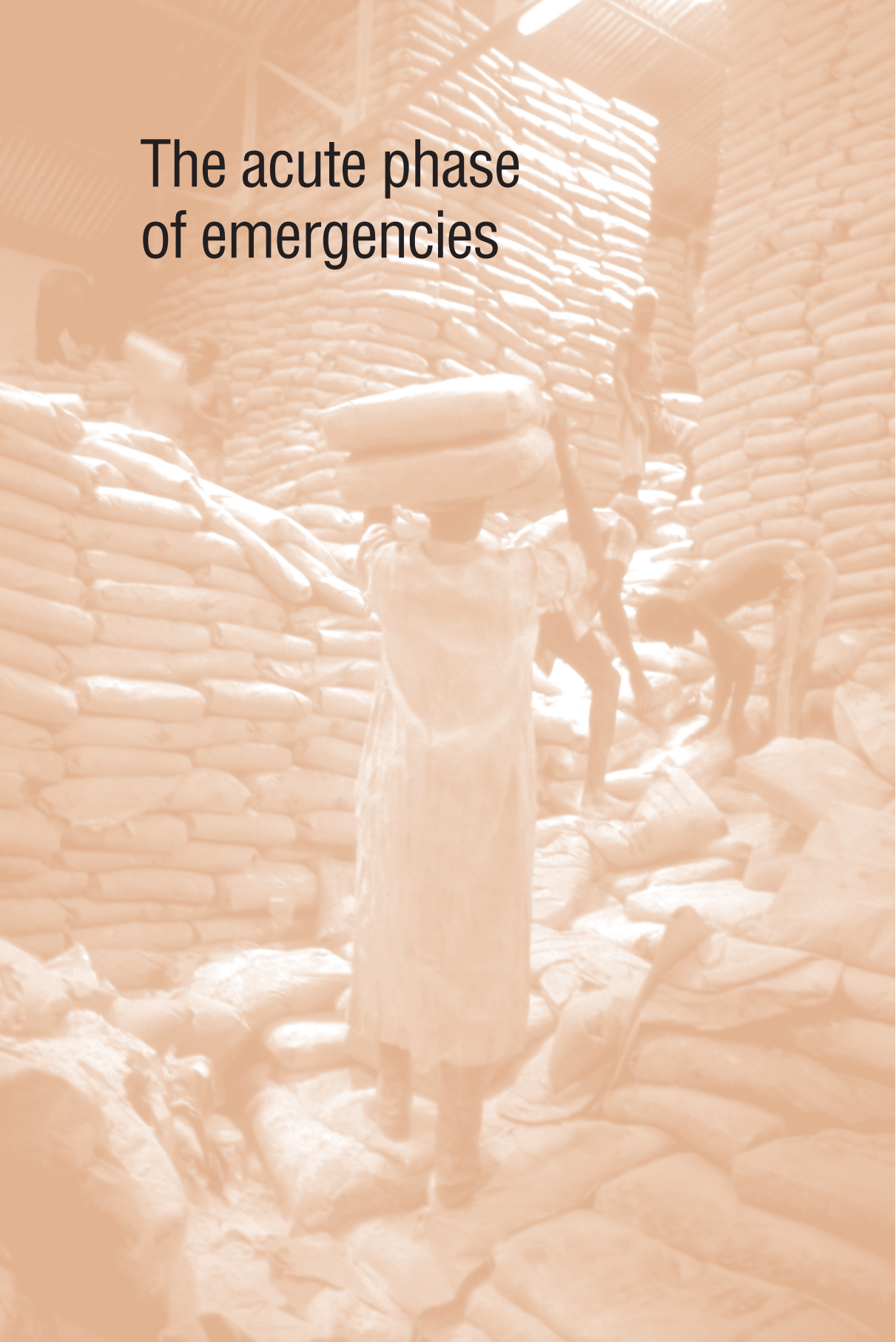
³ *Management of severe malnutrition. A manual for physicians and other senior health workers*. WHO, Geneva, 1999; *Guidelines for the inpatient treatment of severely malnourished children*. WHO, Geneva, 2003.

cover and the increased risk of their dying are almost exclusively due to faulty feeding practices and failing to identify and treat infection, especially diarrhoea, dysentery, measles, otitis media, pneumonia, tuberculosis, urinary tract infection, malaria, intestinal helminthiasis and HIV/AIDS.

No under-five children should be suffering from severe malnutrition once an emergency's acute stage has passed, household food needs have been met, and programmes to support infant and child feeding are under way. If a case is identified, the underlying causes need to be investigated and corrective measures taken immediately to avoid any recurrence. The presence of many malnourished under-five children is a clear indication of failure at some level. Relief programmes should be evaluated rapidly to identify weaknesses, and adjustments made accordingly.

During the medical and nutritional treatment of severely malnourished children, every effort should be made to keep breastfeeding mothers and children together, and to re-establish breastfeeding where it has been interrupted.

The acute phase of emergencies



PRINCIPLE 9

To minimize an emergency's negative impact on feeding practices, interventions should begin immediately. The focus should be on supporting caregivers and channelling scarce resources to meet the nutritional needs of the infants and young children in their charge.

Mortality among Infants and children is usually highest at the onset of an emergency when conditions are the most threatening. Despite possibly inadequate human and material resources at this stage, it is essential to ensure that feeding practices are as close to optimal as possible.

Breastfeeding requires particular attention in view of the challenges that women face, including threats to their personal safety. Sustaining breastfeeding is easier than re-establishing lactation, but women may nevertheless still require extra support and encouragement to persevere.

The sooner vulnerable households with infants and young children are identified, the easier it should be to hasten their receipt of goods and services even before therapeutic centres and supplementary feeding programmes have begun formally operating.

The initiation of even simple services to alleviate pressures on children and caregivers can have a major impact during this decisive period. For example, merely assembling concerned households and raising community awareness of their special needs can help to ensure that scarce resources are made available for their use.

Suggestions for early interventions

- Identify households with infants, young children or pregnant women, and the most vulnerable groups and individuals, for example in single-adult households, households headed by elderly or handicapped persons, and pregnant women with no adult assistance.
- For the identified households, especially the most vulnerable:
 - Negotiate priority acquisition of scarce resources such as shelter materials and utensils for food preparation; and registration for basic services, for example health care and food distribution.
 - Organize assistance in rapid (re-)settlement, for example allocating sites, building shelters and salvaging property.
- Organize support for breastfeeding women by:
 - Setting up sheltered breastfeeding stations near registration and distribution points.
 - Recruiting experienced women to provide encouragement and practical assistance.
 - Alleviating harsh conditions, for example by making water and fuel accessible.

- Provide emergency nourishment for infants whose mothers are absent or incapacitated by:
 - Cooperating with those responsible for orphans and other unaccompanied children.
 - Searching for wet-nurses and arranging for other long-term feeding solutions.
 - Acquiring breast-milk substitutes for infants who have to be fed on them, and preparing and feeding them safely by cup.
- Provide emergency foods, or appropriate fresh ingredients, for feeding young children by:
 - Acquiring and distributing suitable local ingredients.
 - Improving access to available food for households with young children.
 - Organizing, in exceptional circumstances, on-site cooking of nutritious, easy-to-eat foods for young children.
- Initiate longer-term measures to promote optimal feeding, for example training that includes:
 - A statement, in suitable languages, defining optimal infant and child feeding.
 - Basic education for health and community workers and those receiving unaccompanied children, with emphasis on ensuring optimal feeding.
 - Establishing exclusive breastfeeding from birth, facilitating relactation and supporting breastfeeding women.
 - Basic information on complementary feeding and sustained breastfeeding.
 - Information for programme managers, community workers, health and nutrition workers, camp managers and home visitors.

Assessment, intervention and monitoring



PRINCIPLE 10

Promoting optimal feeding for infants and young children in emergencies requires a flexible approach based on continual careful monitoring.

Initial assessment and preparation for action

Because the characteristics of emergency-affected populations and the conditions they face vary so widely, a flexible approach is required to planning and implementing interventions. Getting things right depends on an accurate – and by necessity rapid – assessment of the situation. Generally speaking, methods can be informal, that is prevailing feeding practices and conditions can be investigated through observation or by conducting interviews with key informants (especially caregivers) from the affected population.

Although formal surveys are not necessary to get started, every effort should be made to ensure that initial results are representative of an entire population. To achieve this, it is important, as quickly as possible, to:

- Move into the environment
- Determine what is going on
- Talk with caregivers:
 - to learn how they are feeding infants and young children
 - to understand what they already know and how they would like to feed their children
- Learn from caregivers what is required to enable them to feed their children optimally

Information about pre-disaster feeding practices will provide useful clues to understanding current practices, although changes may have already occurred since the start of the emergency. In cases where artificial feeding was the norm, a special effort will be required to protect, promote and support breastfeeding.

Members of the emergency management team and other emergency services – for example those responsible for health and nutritional surveillance, logistics, and social or community services – can provide additional information that will facilitate determining initial assessment priorities at an emergency site (**Annex 11**).

Based on the initial assessment, a number of key decisions can be made quickly concerning:

- Organization of breastfeeding promotion and relactation
- Estimation of the breast-milk substitutes and feeding facilities required
- Provision of initial support for acquisition and preparation of appropriate foods

- Community mobilization for participation in discussion, problem-solving and support
- Cooperation with other services

This basic information provides a foundation for those in charge, in collaboration with the emergency-affected population and national and international relief workers, to decide how best to promote optimal feeding. Given the inherently unstable conditions in emergencies, both formal and informal approaches should be continually used throughout the initial assessment period.

Practical considerations

Information

Information on appropriate feeding practices should be disseminated to key groups, for instance breastfeeding women and other caregivers, emergency-affected communities, service providers, advisers, nongovernmental organizations, national and international relief agencies, journalists, donors and the public at large. Before launching educational campaigns, it is important to determine which factors, for example HIV/AIDS, are the most threatening to appropriate feeding practices in which populations, and how the relevant audience can be effectively reached.

Resources

During emergencies, often it is not so much that people lack knowledge but that they are deprived of the resources to act on the knowledge they have. Availability of resources should be taken carefully into account in planning interventions. Direct provision of resources is costly, seldom serves a durable solution, favours dependency, and extends the period of need for outside support. Community inputs are important in determining how barriers can be removed so that people can produce, acquire or share what they need on their own. Community participation helps to ensure that relief personnel make the right decisions and to improve beneficiaries' self-help capacities.

Communication

Communication between service providers and beneficiaries is as important as it is between service providers themselves. It is the key to ensuring efficient, effective and sustained promotional efforts, to being informed of needs and services available to meet them, and to providing a framework for monitoring conditions, resources and the impact of interventions.

Support networks

Support networks can help promote optimal feeding practices by channelling diverse talents, experiences, and other human and material resources; and link-

ing dissimilar groups, for example breastfeeding women and single-adult households with neighbours, single-adult households with income-generating groups, and breastfeeding women and older persons.

Special programmes

Special programmes are often needed during emergencies to deal with specific circumstances, for example large numbers of children, especially the unaccompanied, for whom breastfeeding is not possible. Large-scale programmes may also be needed to deal with relactation, wet-nursing, artificial feeding, and complementary feeding in orphanages or shelters.

Community-based action

Members of the emergency-affected population, in collaboration with representatives of assisting communities and services, should participate in setting priorities, searching for solutions and sustaining action. Three basic questions should be kept in mind in this connection:

- *How can appropriate feeding practices be strengthened and expanded?*
- *How can unhelpful or dangerous feeding practices be curbed?*
- *How can better feeding practices be introduced and promoted?*

Emphasis should be on activities that:

- Can be implemented using readily available resources.
- Have a maximum impact.
- Are sustainable within the affected community after initial outside inputs have been provided.
- Have a lasting impact during and after the emergency.
- Improve the knowledge, skills and independence of caregivers, households and communities.
- Have a direct practical impact and do not rely on education alone.
- Are not dependent on a single food source, for example blended food.

Monitoring

Conditions at emergency sites can evolve rapidly according to season, changes in the level of personal security, size of the affected population, flow of international food and non-food support, external political influences, and consequences of action taken. Observing conditions and their impact on feeding practices, which should be monitored using appropriate indicators (**Annex 12**), is invaluable for both forecasting and recognizing change.

As already noted, continual informal assessment and communication networks are central to monitoring. Objectives should be clearly defined for every intervention, and criteria should be identified for assessing their short- and

longer-term impact. As changes in conditions and practices are observed, activities should be reviewed to determine whether they remain relevant, or whether refinement, reduction or replacement may be required.

To the extent possible the following variables should also be routinely assessed:

- Nutritional status of under-five children
- Nutritional status of pregnant and lactating women
- Prevalence of low-birth-weight infants, especially those born full term
- Prevalence of exclusive and partial breastfeeding during the first six months of life
- Preparation and feeding of complementary foods, including their energy density micronutrient content, variety, frequency and safety
- Household food security
- Mortality rate among infants and young children

Conclusion

Natural disasters, war, civil unrest and other catastrophes continue to disrupt, and often seriously endanger, the lives of millions of people around the world. Whatever their cause, emergencies pose a particularly grave threat to the health, nutritional status and very survival of infants and young children. Fortunately, much of the disability and death typical among this age group in such circumstances can be averted – provided proper feeding and care can be ensured.

The guiding principles presented here are intended to serve as a starting point for organizing sustained pragmatic field interventions that will ensure appropriate feeding and care for infants and young children at all stages of an organized emergency response. They should be applied flexibly in conjunction with suitable manuals, guidelines, training curricula and other practical field-oriented documentation that treat in detail a variety of interrelated topics.

Responsible national authorities and concerned international and nongovernmental organizations are invited to use these guiding principles as a basis for training personnel responsible for emergency preparedness and response, and for reacting directly on behalf of needy populations during emergencies. In particular, they may wish to use the guiding principles as a basis for:

- Protecting, promoting and supporting breastfeeding
- Ensuring that breast-milk substitutes are distributed only when strictly necessary and promoting their safe use
- Ensuring that older infants and young children receive sufficient energy and nutrients to meet their requirements for healthy growth, development and activity
- Promoting the physical and mental health of those who are responsible for feeding and caring for infants and young children
- Identifying and eliminating the underlying causes of sub-optimal feeding practices

Meeting the specific nutritional requirements of infants and young children, including promoting and supporting optimal feeding practices, should be a routine part of any emergency relief response. Indeed, it should be at the centre of efforts to protect the right of affected children to food, life and a productive future.

ANNEX 1

Recommended reading

General references concerning nutrition in emergencies

- WHO. *Manual on the management of nutrition in major emergencies*. Geneva, WHO, 2000.
- WFP. *Food and nutrition handbook*. Rome, WFP, 1999.
- UNHCR. *Handbook for Emergencies*. UNHCR, Geneva, 2000.
- Médecins sans Frontières. *Nutrition guidelines*. MSF, Paris, 1995.
- UNICEF/UNHCR/WFP/WHO. *Food and nutrition needs in emergencies*. WFP, Rome, 2002.
- UNHCR/WFP. *Guidelines for selective feeding programmes in emergency situations*. Geneva, 1999.

Micronutrient deficiencies

- WHO/UNICEF/IVACG Task Force. *Vitamin A supplements: a guide to their use in the treatment and prevention of vitamin A deficiency and xerophthalmia*. Second edition. Geneva, WHO, 1997.
- Sommer A. *Vitamin A deficiency and its consequences: a field guide to detection and control*. Third edition. WHO, Geneva, 1995.
- WHO. *Scurvy and its prevention and control during major emergencies*. Geneva, WHO, 1999 (WHO/NHD/99.11).
- WHO. *Thiamine deficiency and its prevention and control during major emergencies*. Geneva, WHO, 1999 (WHO/NHD/99.13).
- UNICEF/UNU/WHO. *Iron deficiency anaemia. Assessment, prevention, and control. A guide for programme managers*. Geneva, WHO, 2001 (WHO/NHD/01.3).
- ICCIDD/UNICEF/WHO. *Assessment of iodine deficiency disorders and monitoring their elimination*. Second edition. Geneva, WHO, 2001 (WHO/NHD/01.1).

Surveillance and assessment of nutritional status

- WHO. *Rapid health assessment protocols in emergencies*. Geneva, WHO, 1999.
- WHO. Regional Office for the Eastern Mediterranean. *Field guide on rapid nutritional assessment in emergencies*. Alexandria, WHO, 1995.
- WHO Expert Committee. *Physical status: the use and interpretation of anthropometry*. Geneva, WHO, 1995 (Technical Report Series, No. 854).

Infant and young child feeding, breastfeeding promotion, complementary feeding, HIV and infant feeding

- Global Strategy for Infant and Young Child Feeding.* Geneva, WHO, 2003.
- Protecting, promoting and supporting breastfeeding: the special role of maternity services.* A joint WHO/UNICEF Statement. Geneva, WHO, 1989.
- Relaxation: review of experience and recommendations for practice.* Geneva, WHO, 1998 (WHO/CHS/CAH/98.14).
- Infant feeding: the physiological basis.* Geneva, WHO, 1990.
- Guidelines concerning the main health and sociocultural circumstances in which infants have to be fed on breast-milk substitutes.* Geneva, WHO, 1986 (WHA39/1986/REC/1, Annex 6, Part 2).
- International Code of Marketing of Breast milk Substitutes.* Geneva, WHO, 1981.
- Complementary feeding. Family foods for breastfed children.* Geneva, WHO, 2000.
- Guiding principles for complementary feeding of the breastfed child.* Washington, DC, PAHO/World Health Organization, 2003. (http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/guiding_principles.pdf)
- HIV and infant feeding. Guidelines for decision-makers.* Geneva, WHO, 2003 (http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/HIV_IF_DM.pdf).
- HIV and infant feeding. A guide for health care managers and supervisors.* Geneva, WHO, 2003 (http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/HIV_IF_MS.pdf)
- HIV transmission through breastfeeding. A review of available evidence.* Geneva, WHO, 2004.

Infant and young child feeding and care in emergencies

- WHO. Regional Office for Europe. *Infant feeding in emergencies: A guide for mothers.* Copenhagen, WHO, 1997 (EU/IPC/LVNG 01 02 08 and <http://www.who.dk/tech/hp/breastfeed.pdf>).
- Carter K. *Feeding in emergencies for infants under 6 months – an OXFAM Team Review Paper.* Oxford, OXFAM, April 1996.
- International Baby Food Action Network (IBFAN). *Crucial aspects of infant feeding in emergency and relief situations.* Geneva, GIFA/IBFAN, 1996.
- Moro D. Birth weight and breast feeding of babies born during the war in one municipal area of Sarajevo. *European Journal of Clinical Nutrition*, 1995, 49(Suppl.2):537–539.
- Kelly M. Infant feeding in emergencies. *Disasters* 1993, 17(2):110–121.

***Prevention, treatment and control of communicable diseases;
management of severe malnutrition***

WHO. *Management of severe malnutrition: a manual for physicians and other senior health workers*. Geneva, WHO, 1999.

WHO. *Management of the child with a serious infection or severe malnutrition*. Geneva, WHO, 2000 (WHO/FCH/CAH/001).

Safe food, safe feeding

Motarjemi Y et al. Contaminated weaning food: a major risk factor for diarrhoea and associated malnutrition. *Bulletin of the World Health Organization*, 1993, 71(1):79–92.

WHO. *Basic principles for the preparation of safe food for infants and young children*. Geneva, WHO, 1996 (WHO/FNU/FOS/96.6).

ANNEX 2

Practical steps to ensure appropriate infant and young child feeding in emergencies¹

1. Ensure that action is based on an adequate understanding of the factors affecting infant-feeding practices in the specific situation.

- A rapid assessment should be carried out immediately at the onset of the emergency, including information on pre-crisis infant-feeding practices and the impact of prevailing conditions on infants and on the ability of mothers to breast-feed and care for children. Where possible, information should be accessed on demographics and numbers of infants, orphans, etc.
- A second-stage emergency assessment should be carried out in conjunction with implementation of early relief activities. It should include mobilization of the affected population to participate in problem identification, solution and support; assess resource requirements; and identify mechanisms to actively involve local and international partners. The prevalence of malnutrition among infants younger than 6 months should be assessed by their inclusion in nutrition surveys.

2. Create a mechanism for coordinating and monitoring infant-feeding activities.

- A lead agency should be nominated to manage infant-feeding issues. A framework for action should be agreed upon.
- Representatives of national and international agencies involved in food aid, social services and health/nutrition should meet regularly in a specific forum to address infant-feeding issues.
- Monitoring of interventions includes: (1) mortality/morbidity of infants; (2) provision of infant-feeding support; (3) procurement, distribution and end use of breast-milk substitutes or complementary foods; and (4) quality of infant foods supplied and or/used by the affected population.
- Include infant-feeding issues in initial screening for new arrivals. Information collection on number of infants and unaccompanied infants and infant-feeding practices.

¹ Source: Food and nutrition needs in emergencies, Annex 9c. Joint UNHCR/UNICEF/WFP/WHO Guidelines. Rome, World Food Programme, 2002.

3. Eliminate practices that undermine breastfeeding.

- Donations of infant formula and other breast-milk substitutes should be systematically refused (i.e. any requirements for BMS should be met by purchasing of supplies).
- Dried milk powder should NEVER be distributed as part of a general ration programme because of the risk that it will be used as a breast-milk substitute. Rather, it should be mixed with other food (such as blended foods) or provided under strictly supervised wet-feeding conditions.
- Bottles and teats are should never be accepted or distributed; cups should be used instead.
- Where UHT (long-life milk) is distributed, it should be clearly labelled with an appropriate health message.

4. Recognize the special needs of women feeding infants.

- Effective referral systems (e.g. registration, nutrition/health services) should be established at the outset.
- Where appropriate, provide secluded shelter areas for breastfeeding, including rest areas in transit centres.
- Where appropriate, facilitate and prioritize access to food aid, water, etc., for women with infants and young children.
- Provide additional fortified-food supplement for expectant and nursing mothers and young children.
- Integrate support services for breastfeeding and infant-feeding issues into health services, growth-monitoring services, unaccompanied children centres and nutrition rehabilitation centres (supplementary and therapeutic).

5. Minimize the dangers in feeding to infants and their families.

Certain criteria are met where infant formula is provided:

- Infant is assessed by a qualified nutrition or health worker to verify need.
- Infant formula is distributed and targeted only to infants who have an established requirement.
- The supply is continued as long as the child needs it.¹
- The labels must be in a language that the mother understands and must adhere to specific labelling requirements of the International Code of Marketing of Breast-milk Substitutes (**Annex 6**). This can be achieved

¹ To meet an infant's nutritional needs during the first six months of life, an average daily ration of approximately 110 g (or 3.3 kg per month) of a bona fide infant formula is required. This figure does not take into account possible wastage during transport and preparation.

by re-labelling brand products or purchasing generically labelled products that display no company logos or advertisements.

- The delivery of breast-milk substitutes to the mother is accompanied by practical information on how to safely prepare the milk (e.g. how to cup feed, how to sterilize).
- There is no display of brand-name products.
- Breast-milk substitutes are prepared in accordance with the relevant Codex Alimentarius standards.
- Any facility supporting mothers who are unable to breast-feed should provide separate facilities for mothers who are breastfeeding and those who are using infant formula.
- Procurement of small amounts of generic infant formula (by designated agency) should be made available for specific cases in need.

6. Increase awareness and knowledge about the benefits of breastfeeding among all stakeholders in the emergency situation.

- Expertise should be available as resource for emergency agency staff to gain better understanding good practice in infant feeding and to assist agencies in developing strategies to develop good practice.
- Ensure that expertise (preferably national) is available to train health workers and community-based staff in breastfeeding and infant-feeding issues to ensure that consistent and well-informed advice is given.
- Breastfeeding promotion via health workers and via radio and other media.

ANNEX 3

Feeding in exceptionally difficult circumstances¹

20. Families in *difficult situations* require special attention and practical support to be able to feed their children adequately. In such cases the likelihood of not breastfeeding increases, as do the dangers of artificial feeding and inappropriate complementary feeding. Wherever possible, mothers and babies should remain together and be provided the support they need to exercise the most appropriate feeding option under the circumstances.
21. Infants and young children who are *malnourished* are most often found in environments where improving the quality and quantity of food intake is particularly problematic. To prevent a recurrence and to overcome the effects of chronic malnutrition, these children need extra attention both during the early rehabilitation phase and over the longer term. Nutritionally adequate and safe complementary foods may be particularly difficult to obtain and dietary supplements may be required for these children. Continued frequent breastfeeding and, when necessary, relactation are important preventive steps since malnutrition often has its origins in inadequate or disrupted breastfeeding.
22. The proportion of infants with *low birth weight* varies from 6% to more than 28% depending on the setting. Most are born at or near term and can breastfeed within the first hour after birth. Breast milk is particularly important for preterm infants and the small proportion of term infants with very low birth weight; they are at increased risk of infection, long-term ill-health and death.
23. Infants and children are among the most vulnerable victims of natural or human-induced *emergencies*. Interrupted breastfeeding and inappropriate complementary feeding heighten the risk of malnutrition, illness and mortality. Uncontrolled distribution of breast-milk substitutes, for example in refugee settings, can lead to early and unnecessary cessation of breastfeeding. For the vast majority of infants emphasis should be on protecting, promoting and supporting breastfeeding and ensuring timely, safe

¹ Source: *Global Strategy for Infant and Young Child Feeding*. Geneva, World Health Organization, 2002 (<http://www.who.int/nut/publications.htm#inf>).

and appropriate complementary feeding. There will always be a small number of infants who have to be fed on breast-milk substitutes. Suitable substitutes, procured, distributed and fed safely as part of the regular inventory of foods and medicines, should be provided.

24. An estimated 1.6 million children are born to *HIV-infected women* each year, mainly in low-income countries. The absolute risk of HIV transmission through breastfeeding for more than one year – globally between 10% and 20% – needs to be balanced against the increased risk of morbidity and mortality when infants are not breastfed. All HIV-infected mothers should receive counselling, which includes provision of general information about meeting their own nutritional requirements and about the risks and benefits of various feeding options, and specific guidance in selecting the option most likely to be suitable to their situation. Adequate *replacement feeding* is needed for infants born to HIV-positive mothers who choose not to breastfeed. It requires a suitable breast-milk substitute, for example an infant formula prepared in accordance with applicable Codex Alimentarius standards, or a home-prepared formula with micro-nutrient supplements. Heat-treated breast milk, or breast milk provided by an HIV-negative donor mother, may be an option in some cases. To reduce the risk of interfering with the promotion of breastfeeding for the great majority, providing a breast-milk substitute for these infants should be consistent with the principles and aim of the International Code of Marketing of Breast-milk Substitutes. For mothers who test negative for HIV, or who are untested, exclusive breastfeeding remains the recommended option.
25. Children living in *special circumstances* also require extra attention – for example, orphans and children in foster care, and children born to adolescent mothers, mothers suffering from physical or mental disabilities, drug- or alcohol-dependence, or mothers who are imprisoned or part of disadvantages or otherwise marginalized populations.

...

Implementing high-priority action

34. A comprehensive national policy, based on a thorough needs assessment, should foster an environment that protects, promotes and supports appropriate infant and young child feeding practices. An effective feeding policy consistent with efforts to promote overall household food security requires the following critical interventions:

....

For support for feeding infants and young children in exceptionally difficult circumstances

- ensuring that health workers have accurate and up-to-date information about infant feeding policies and practices, and that they have the specific knowledge and skills required to support caregivers and children in all aspects of infant and young child feeding in exceptionally difficult circumstances;
- creating conditions that will facilitate exclusive breastfeeding, by provision, for example, of appropriate maternity care, extra food rations and drinking-water for pregnant and lactating women, and staff who have breastfeeding counselling skills;
- ensuring that suitable – preferably locally available – complementary foods are selected and fed, consistent with age and nutritional needs of older infants and young children;
- searching actively for malnourished infants and young children so that their condition can be identified and treated, they can be appropriately fed, and their caregivers can be supported;
- giving guidance for identifying infants who have to be fed on breast-milk substitutes, ensuring that a suitable substitute is provided and fed safely for as long as needed by the infants concerned, and preventing any “spillover effect” of artificial feeding into the general population;
- ensuring that health workers with knowledge and experience in all aspects of breastfeeding and replacement feeding are available to counsel HIV-positive women;
- adapting the Baby-friendly Hospital Initiative by taking account of HIV/AIDS and by ensuring that those responsible for emergency preparedness are well trained to support appropriate feeding practices consistent with the Initiative’s universal principles;
- ensuring that whenever breast-milk substitutes are required for social or medical reasons, for example for orphans or in case of HIV-positive mothers, they are provided for as long as the infants concerned need them.

ANNEX 4

WHO Technical Consultation on Behalf of the UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Task Team on Mother-to-Child Transmission of HIV

Geneva, 11–13 October 2000

Conclusions and recommendations regarding infant feeding

Risks of breastfeeding and replacement feeding

The benefits of breastfeeding are greatest in the first six months of life (optimal nutrition, reduced morbidity and mortality due to infections other than HIV, and delayed return of fertility).

Exclusive breastfeeding during the first 4–6 months of life carries greater benefits than mixed feeding with respect to morbidity and mortality from infectious diseases other than HIV.

Although breastfeeding no longer provides all nutritional requirements after six months, breastfeeding continues to offer protection against serious infections and to provide significant nutrition to the infant (half or more of nutritional requirements in the second six months of life, and up to one third in the second year).

Replacement feeding carries an increased risk of morbidity and mortality associated with malnutrition and associated with infectious disease other than HIV. This is especially high in the first 6 months of life and decreases thereafter. The local environment and the individual woman's situation affect the risk and feasibility of replacement feeding.

Breastfeeding is associated with a significant additional risk of HIV transmission from mother to child as compared to non-breastfeeding. This risk depends on clinical factors and may vary according to pattern and duration of breastfeeding. In untreated women who continue breastfeeding after the first year, the absolute risk of transmission through breastfeeding is 10–20%.

The risk of MTCT of HIV through breastfeeding appears to be greatest during the first months of infant life but persists as long as breastfeeding continues. Half of the breastfeeding-related infections may occur after 6 months with continued breastfeeding into the second year of life.

There is evidence from one study that exclusive breastfeeding in the first 3 months of life may carry a lower risk of HIV transmission than mixed feeding.

Recommendations:

- When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended.
- Otherwise, exclusive breastfeeding is recommended during the first months of life.
- To minimize HIV transmission risk, breastfeeding should be discontinued as soon as feasible, taking into account local circumstances, the individual woman's situation and the risks of replacement feeding (including infections other than HIV and malnutrition).
- When HIV-infected mothers choose not to breastfeed from birth or stop breastfeeding later, they should be provided with specific guidance and support for at least the first 2 years of the child's life to ensure adequate replacement feeding. Programmes should strive to improve conditions that will make replacement feeding safer for HIV-infected mothers and families.

Cessation of breastfeeding

There are concerns about the possible increased risk of HIV transmission with mixed feeding during the transition period between exclusive breastfeeding and complete cessation of breastfeeding. Indirect evidence on the risk of HIV transmission through mixed feeding, suggests that keeping the period of transition as short as possible may reduce the risk.

Shortening this transition period however may have negative nutritional consequences for the infant, psychological consequences for the infant and the mother, and expose the mother to the risk of breast pathology which may increase the risk of HIV transmission if cessation of breastfeeding is not abrupt.

The best duration for this transition is not known and may vary according to the age of the infant and/or the environment.

Recommendation

- HIV-infected mothers who breastfeed should be provided with specific guidance and support when they cease breastfeeding to avoid harmful nutritional and psychological consequences and to maintain breast health.

Infant feeding counselling

Infant feeding counselling has been shown to be more effective than simple advice for promoting exclusive breastfeeding in a general setting. Good counselling may also assist HIV-infected women to select and adhere to safer infant feeding options, such as exclusive breastfeeding or complete avoidance of breastfeeding, which may be uncommon in their environment. Effective coun-

selling may reduce some of the breast health problems that may increase the risk of transmission.

Many women find that receiving information on a range of infant feeding options is not sufficient to enable them to choose and they seek specific guidance. Skilled counselling can provide this guidance to help HIV-infected women make a choice that is appropriate for their situation to which they are more likely to adhere. The options discussed during counselling need to be selected according to local feasibility and acceptability.

The level of understanding of infant feeding in the context of MTCT in the general population is very limited, thus complicating efforts to counsel women effectively.

The number of people trained in infant feeding counselling is few relative to the need and expected demand for this information and support.

Recommendations

- All HIV-infected mothers should receive counselling, which includes provision of general information about the risks and benefits of various infant feeding options, and specific guidance in selecting the option most likely to be suitable for their situation. Whatever a mother decides, she should be supported in her choice.
- Assessments should be conducted locally to identify the range of feeding options that are acceptable, feasible, affordable, sustainable and safe in a particular context.
- Information and education on mother-to-child transmission of HIV should be urgently directed to the general public, affected communities and families.
- Adequate numbers of people who can counsel HIV-infected women on infant feeding should be trained, deployed, supervised and supported. Such support should include updated training as new information and recommendations emerge.

Breast health

There is some evidence that breast conditions including mastitis, breast abscess, and nipple fissure may increase the risk of HIV transmission through breastfeeding, but the extent of this association is not well quantified.

Recommendation:

- HIV-infected women who breastfeed should be assisted to ensure that they use a good breastfeeding technique to prevent these conditions, which should be treated promptly if they occur.

Maternal health

In one trial, the risk of dying in the first 2 years after delivery was greater among HIV-infected women who were randomized to breastfeeding than among those who were randomized to formula feeding. This result has yet to be confirmed by other research.

Women who do not breastfeed or stop breastfeeding early are at greater risk of becoming pregnant.

Recommendation

- HIV-infected women should have access to information, follow-up clinical care and support, including family planning services and nutritional support. Family planning services are particularly important for HIV-infected women who are not breastfeeding.

ANNEX 5

Ten steps to successful breastfeeding¹

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breast milk, unless *medically* indicated.
7. Practise rooming-in – allow mothers and infants to remain together – 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

¹ From: *Protecting, promoting and supporting breastfeeding: the special role of maternity services*. A joint WHO/UNICEF statement. Geneva, World Health Organization, 1989.

ANNEX 6

Article 9 (labelling) from the International Code of Marketing of Breast-milk Substitutes¹

- 9.1 Labels should be designed to provide the necessary information about the appropriate use of the product, and so as not to discourage breastfeeding.
- 9.2 Manufacturers and distributors of infant formula should ensure that each container has a clear, conspicuous, and easily readable and understandable message printed on it, or on a label which cannot readily become separated from it, in an appropriate language, which includes all the following points:
 - (a) the words “Important Notice” or their equivalent;
 - (b) a statement of the superiority of breastfeeding;
 - (c) a statement that the product should be used only on the advice of a health worker as to the need for its use and the proper method of use;
 - (d) instructions for appropriate preparation, and a warning against the health hazards of inappropriate preparation.

Neither the container nor the label should have pictures of infants, nor should they have other pictures or text which may idealize the use of infant formula. They may, however, have graphics for easy identification of the product as a breast-milk substitute and for illustrating methods of preparation. The terms “humanized”, “maternalized” or similar terms should not be used. Inserts giving additional information about the product and its proper use, subject to the above conditions, may be included in the package or retail unit. When labels give instructions for modifying a product into infant formula, the above should apply.

- 9.3 Food products within the scope of this Code, marketed for infant feeding, which do not meet all the requirements of an infant formula, but which can be modified to do so, should carry on the label a warning that the unmodified product should not be the sole source of nourishment of an infant. Since sweetened condensed milk is not suitable for infant feed-

¹ *International Code of Marketing of Breast-milk Substitutes*. Geneva, WHO, 1981.

ing, nor for use as a main ingredient of infant formula, its label should not contain purported instructions on how to modify it for that purpose.

- 9.4 The label of food products within the scope of this Code should also state all the following points: (a) the ingredients used; (b) the composition/analysis of the product; (c) the storage conditions required; and (d) the batch number and the date before which the product is to be consumed, taking into account the climatic and storage conditions of the country concerned.

ANNEX 7

Examples of rations for general food distribution providing 2100 kcal per person per day

Commodities	Ration 1 (g)	Ration 2 (g)	Ratio 3 (g)	Function
Wheat flour/maize meal/rice	450	420	400	Main source of energy and protein.
Pulses micronutrients.	50	60	60	Provide protein and various
Oil/fat	25	30	25	Concentrated source of energy for children, also needed for palatability and the absorption of vitamin A.
Fortified cereal blend	—	—	50	Provides essential vitamins and minerals, and is useful as weaning food.
Canned fish/meat	—	30	—	Needed for proteins and minerals (including iron).
Sugar	20	20	15	Needed for cultural habits, palatability, and home oral rehydration.
Salt	5	5	5	Provides sodium, and is needed for home oral rehydration.
Vegetables/fruits	— as available —			Valuable sources of vitamins and minerals.
Condiments/spices	— as available —			Needed because of cultural habits and for palatability.
Approximate food value:				
Energy (kcal)	2116	2092	2113	
Protein (g)	51	45	58	
Fat (g)	41	38	43	

Notes:

1. All the above rations provide at least minimum quantities of energy, protein and fat. Fresh foods (notably vegetables and fruits), condiments and spices should also be available to the population wherever possible.
2. All the above rations provide additional quantities of various micronutrients through the inclusion of a fortified cereal blend. Fortified cereal blends are good sources of micronutrients and, when provided in general rations, should be consumed by all members of the household. Examples of cereal blends include CSB and WSB (produced in the USA), faffa (produced in Ethiopia), and likuni phala (produced in Malawi).

Source: UNICEF/UNGCR/WFP/WHO. *Food and nutrition needs in emergencies*. World Food Programme, Rome, 2002.

ANNEX 8

Policy of the UNHCR related to the acceptance, distribution and use of milk products¹ in feeding programmes in refugee settings

(Adopted July 1989)²

1. UNHCR will accept, supply and distribute donations of milk products only if they can be used under strict control and in hygienic conditions, e.g. in a supervised environment for on-the-spot consumption.
2. UNHCR will accept, supply and distribute milk products only when received in a dry form. UNHCR will not accept liquid or semi-liquid products including evaporated or condensed milk.
3. UNHCR will accept, supply and distribute dry skim milk (DSM) only if it has been fortified with vitamin A.
4. UNHCR supports the principle that in general ration programmes protein sources such as pulses, meat or fish are preferred to dried skim milk. UNHCR notes that DSM pre-mixed centrally with cereal flour and sugar is useful for feeding young children especially if prepared with oil.
5. UNHCR will advocate the distribution of dried milk in a take-away form only if it has been previously mixed with a suitable cereal flour, and only when culturally acceptable. The sole exception to this may be where milk forms an essential part of the traditional diet (e.g. nomadic populations) and can be used safely.
6. UNHCR will support the policy of the World Health Organization concerning safe and appropriate infant and young child feeding, in particular by protecting, promoting and supporting breastfeeding and encouraging the timely and correct use of complementary foods in refugee settings.

¹ Any non-fresh milk product such as powdered, evaporated, condensed, or otherwise modified milk, including infant formula.

² WHO cooperated with the United Nations High Commission for Refugees in drafting this policy. The World Food Programme (WFP), in addition to instructing its field staff to apply this policy in all refugee projects, issued its own guidelines to ensure the safe use of dried milk products in all WFP projects. WFP has also informed its staff of the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding, which was adopted by government policy-makers (Florence, Italy, 1990), while emphasizing how food-aid projects can be instrumental in promoting breastfeeding.

7. UNHCR will discourage the distribution and use of breast milk substitutes in refugee settings. When such substitutes are absolutely necessary, they will be provided together with clear instructions for safe mixing, and for feeding with a cup and a spoon.
8. UNHCR will take all possible steps to actively discourage the distribution and use of infant-feeding bottles and artificial teats in refugee settings.
9. UNHCR will advocate that when donations of DSM are supplied to refugee programmes, the specific donors will be approached for cash contributions to be specifically earmarked for operational costs of projects to ensure the safe use of this commodity.

ANNEX 9

Guiding principles for complementary feeding of the breastfed child¹

1. **Duration of exclusive breastfeeding and age of introduction of complementary foods.** Practice exclusive breastfeeding from birth to 6 months of age, and introduce complementary foods at 6 months of age (180 days) while continuing to breastfeed.
2. **Maintenance of breastfeeding.** Continue frequent, on-demand breastfeeding until 2 years of age or beyond.
3. **Responsive feeding.** Practice responsive feeding, applying the principles of psycho-social care. Specifically: (a) feed infants directly and assist older children when they feed themselves, being sensitive to their hunger and satiety cues; (b) feed slowly and patiently, and encourage children to eat, but do not force them; (c) if children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragement; (d) minimize distractions during meals if the child loses interest easily; (e) remember that feeding times are periods of learning and love – talk to children during feeding, with eye-to-eye contact.
4. **Safe preparation and storage of complementary foods.** Practice good hygiene and proper food handling by (a) washing caregivers' and children's hands before food preparation and eating, (b) storing foods safely and serving foods immediately after preparation, (c) using clean utensils to prepare and serve food, (d) using clean cups and bowls when feeding children, and (e) avoiding the use of feeding bottles, which are difficult to keep clean.
5. **Amount of complementary food.** Start at 6 months of age with small amounts of food and increase the quantity as the child gets older, while maintaining frequent breastfeeding. The energy needs from complementary foods for infants with “average” breast-milk intake in developing countries are approximately 200 kcal per day at 6–8 months of age, 300 kcal per day at 9–11 months of age, and 550 kcal per day at 12–23 months of

¹ *Guiding principles for complementary feeding of the breastfed child.* Washington, DC, PAHO/World Health Organization, 2003.

age. In industrialized countries these estimates differ somewhat (130, 310 and 580 kcal/d at 6–8, 9–11 and 12–23 months, respectively) because of the differences in average breast milk intake.

6. **Food consistency.** Gradually increase food consistency and variety as the infant gets older, adapting to the infant's requirements and abilities. Infants can eat pureed, mashed and semi-solid foods beginning at six months. By 8 months most infants can also eat “finger foods” (snacks that can be eaten by children alone). By 12 months, most children can eat the same types of foods as consumed by the rest of the family (keeping in mind the need for nutrient-dense foods, as explained in point 8 below). Avoid foods that may cause choking (i.e. items that have a shape and/or consistency that may cause them to become lodged in the trachea, such as nuts, grapes, raw carrots).
7. **Meal frequency and energy density.** Increase the number of times that the child is fed complementary foods as he/she get older. The appropriate number of feedings depends on the energy density of the local foods and the usual amounts consumed at each feeding. For the average healthy breastfed infant, meals of complementary foods should be provided 2–3 times per day at 6–8 months of age and 3–4 times per day at 9–11 months and 12–24 months of age, with additional nutritious snacks (such as a piece of fruit or bread or chapatti with nut paste) offered 1–2 times per day, as desired. Snacks are defined as foods eaten between meals, usually self-fed, convenient and easy to prepare. If energy density or amount of food per meal is low, or the child is no longer breastfed, more frequent meals may be required.
8. **Nutrient content of complementary foods.** Feed a variety of foods to ensure that nutrient needs are met. Meat, poultry, fish or eggs should be eaten daily, or as often as possible. Vegetarian diets cannot meet nutrient needs at this age unless nutrient supplements or fortified food products are used (*see 9 below*). Vitamin A-rich fruits and vegetables should be eaten daily. Provide diets with adequate fat content. Avoid giving drinks with low nutrient value, such as tea, coffee and sugary drinks such as soda. Limit the amount of juice offered so as to avoid displacing more nutrient-rich foods.
9. **Use of vitamin-mineral supplements or fortified products for infant and mother.** Use fortified complementary foods or vitamin-mineral supplements for the infant, as needed. In some populations, breastfeeding mothers may also need vitamin-mineral supplements or fortified products, both for their own health and to ensure normal concentrations of

certain nutrients (particularly vitamins) in their breast milk. [Such products may also be beneficial for pre-pregnant and pregnant women.]

10. **Feeding during and after illness.** Increase fluid intake during illness, including more frequent breastfeeding, and encourage the child to eat soft, varied, appetizing, favourite foods. After illness, give food more often usual and encourage the child to eat more.

ANNEX 10

Framework for implementing selective feeding programmes

Finding	Action required
Malnutrition rate 15% or over <i>OR</i> 10–14%, plus aggravating factors	Serious situation: <ul style="list-style-type: none">— Blanket supplementary feeding for all members of vulnerable groups, especially children, pregnant and lactating women— Therapeutic feeding programme for severely malnourished individuals
Malnutrition rate 10–14% <i>OR</i> Malnutrition rate 5–9%, plus aggravating factors	Risky situation: <ul style="list-style-type: none">— Targeted supplementary feeding for individuals identified as malnourished in vulnerable groups— Therapeutic feeding programme for severely malnourished individuals
Food availability at household level below 2100 kcal per person per day	Unsatisfactory situation: <ul style="list-style-type: none">— Improve general rations until local food availability and access can be made adequate
Malnutrition rate under 10% with no aggravating factors	Acceptable situation: <ul style="list-style-type: none">— No need for population interventions— Attention for malnourished individuals through regular community services

Notes:

1. This decision chart gives general indications. They should be adapted according to local circumstances.
2. *Malnutrition rate.* This is defined as the percentage of the child population (6 months to 5 years) that is below either 'the reference median weight-for-height minus 2SD' or '80% of reference weight-for-height' and/or with oedema.
3. *Aggravating factors:*
 - Food availability at household level less than the mean energy requirement of 2100 kcal/person/day
 - Crude mortality rate more than 1 per 10 000 per day
 - Epidemic of measles or whooping cough
 - High incidence of respiratory or diarrhoeal diseases.

Source: WHO. *The management of nutrition in major emergencies.* Geneva, 2000.

Determining initial assessment priorities at an emergency site

Determining initial assessment priorities at an emergency site requires information on a number of basic details including:

- **How do prevailing feeding practices compare to optimal practices?**
How long are infants exclusively breastfed?
How long do women breastfeed their children?
When and why are other foods introduced?
Which foods are given and how are they prepared and fed?
- **Do prevailing practices differ from pre-disaster practices and, if so, why?**
The answer will provide clues to understanding influences on feeding behaviour, including any unintended consequences of relief efforts.
- **What is the range of variation in feeding practices?
What determines the choice of practices within the range?
Among which groups are practices least appropriate?**
Answers will help to identify where to begin efforts to improve practices, for example among which age, household or ethnic groups. If some are following better practices than others, understanding why may provide important insights for encouraging change.
- **Which departures from optimal feeding are the most dangerous?**
The answer will provide insight into where emphasis should be placed in taking corrective action.
- **Who makes, or influences, decisions about infant and young child feeding?**
The answer will provide insight into who may be helpful in effecting needed change.
- **How can the community be encouraged to participate in learning more about, and promoting, optimal feeding and caring practices?**
Determining the answer will include learning about the population's social norms and community structures to avoid taking the wrong direction or causing offence.

- **What provisional quick-fix measures are imperative?**

The answer could include communal food preparation for children, arrangements for feeding abandoned children, and cup-feeding breast-milk substitutes.

At the same time, it is important to be informed about prevailing conditions and available resources, for example:

- **General condition of the population** including nutritional and overall health status, sanitation, water and fuel supply, registration procedures, and distribution of non-food items, for example shelter materials, cooking utensils and blankets.
- **Food** including content of the food aid basket and its distribution, local food availability and accessibility, costs, and methods and means for preparation.
- **Community attitudes** about breastfeeding, wet-nursing, relactation, and use of feeding bottles, teats and breast-milk substitutes.
- **Children without mothers** including their number, and care and feeding status.
- **Community structures** including organization, leadership, traditional influential persons, and how care is organized for mothers in the early post-partum period.
- **Human resources** including skills, training, experience, and literacy and education.
- **Associated services** including health, nutrition, sanitation, education, site management, logistics and community mobilization.
- **Household structure and dynamics** including resource acquisition and allocation, meeting the most urgent needs, and decision-making.
- **Income-generating opportunities** including home-based activities, nearby employment, farming opportunities, and marketable skills and crafts.
- **Constraints** including restrictions to interacting with the local community, and religious or cultural protocols.

ANNEX 12

Core indicators for assessing infant feeding practices

A. Indicators of breastfeeding at community (household) level¹

- Exclusive breastfeeding rate (0–4 and 0–6 months)
- Partial breastfeeding rate (0–4 months)
- Continued breastfeeding rate (12–15 months)
- Ever-breastfed rate
- Median or mean duration of breastfeeding

B. Indicators of complementary feeding practices at community/household level²

- Proportion of infants receiving complementary feeding at:
 - 6 months
 - 9 months
 - 12 months
- Frequency of feeding complementary foods at:
 - 6 months
 - 9 months
 - 12 months
- Is the complementary food (e.g. porridge) thick or thin?
- Use of any energy-rich components in complementary feeding
- Use of micronutrient-rich components

C. Indicators of breastfeeding at health facility level³

- Exclusively breastfed by natural mother rate
- Breast-milk substitutes and supplies receipt rate
- Bottle-fed rate

¹ A full list of indicators at household level, together with a sample questionnaire for data collection, is provided in *Indicators for assessing breastfeeding practices* (WHO/CDD/SER/91.14).

² Adapted from: *L'alimentation de complément du jeune enfant*, ORSTOM, Paris, 1995 and *Management of childhood illness*, WHO/UNICEF, 1995.

³ A full list of indicators for use at the health facility level, together with sample questionnaire for data collection, are provided in *Indicators for assessing health facility practices that affect breastfeeding* (document WHO/CDR/93.1).