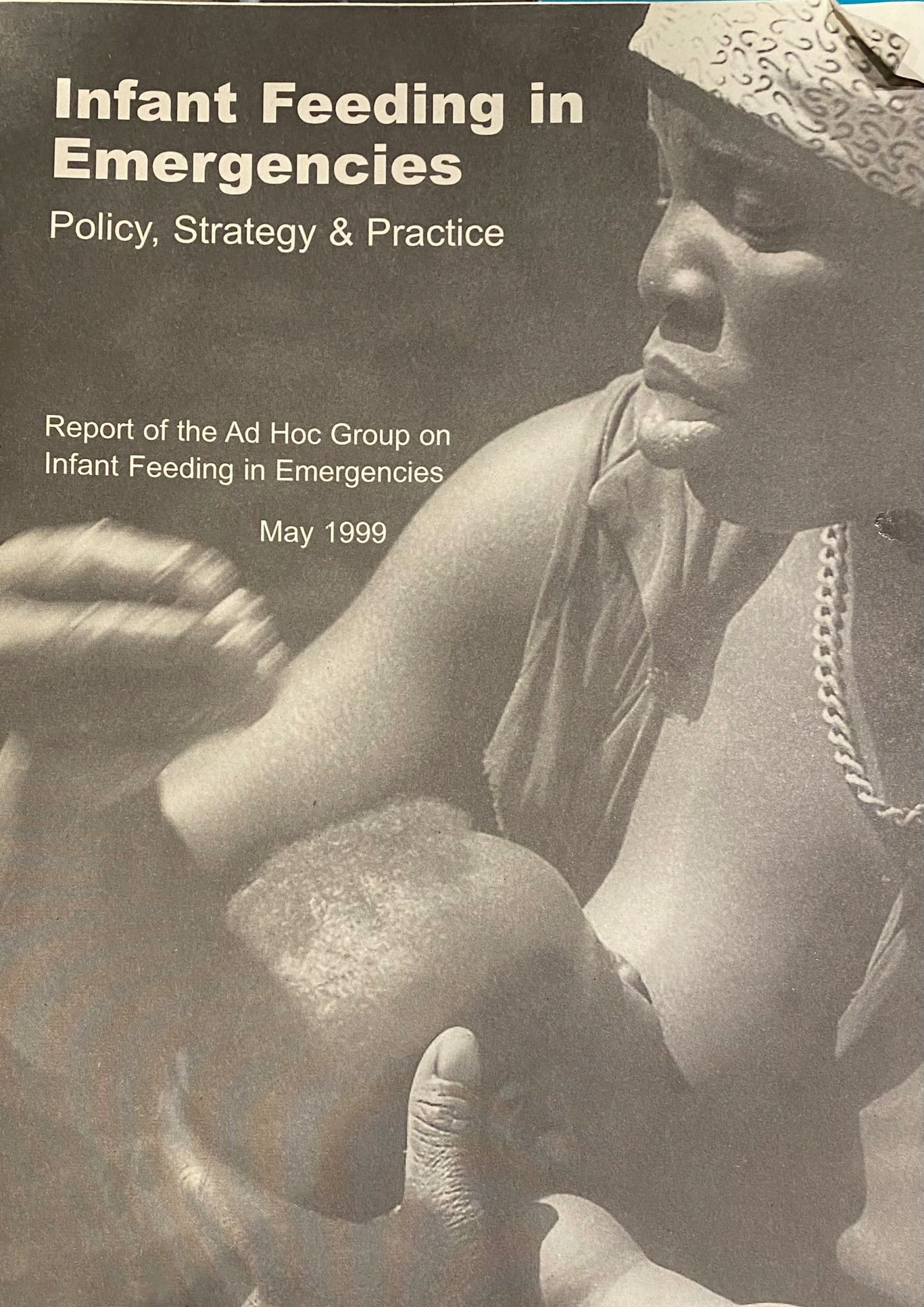


Infant Feeding in Emergencies

Policy, Strategy & Practice

Report of the Ad Hoc Group on
Infant Feeding in Emergencies

May 1999



Infant Feeding in Emergencies: Policy, Strategy and Practice

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Infant Feeding in Emergencies: Policy, Strategy and Practice

Report of the Ad Hoc Group on Infant Feeding in Emergencies: May 1999 (compiled and produced by the Emergency Nutrition Network)

Introduction

Target audience (uses): All users of this document.

Purpose

The purpose of the UK Infant Feeding in Emergencies Group (IFEG) was to build on existing knowledge and to formulate a coherent, appropriate and widely acceptable policy and strategy statement on infant feeding in emergencies for humanitarian agencies. IFEG also attempted to address some of the problems and knowledge gaps around this subject and to identify practical tools to assist agencies in the implementation of policy.

Participants and process

IFEG comprised individuals and representatives from a wide range of agencies concerned to promote positive and appropriate infant feeding practices in emergency and relief settings (see [Annex I](#)). Baby Milk Action, the UK component of the International Baby Food Action Network (IBFAN), initiated the process which resulted in the series of meetings held between September 1996 and December 1997.

Context

<Not available>

A Cambodian mother breastfeeding her child (WHO/M. Crozet)

IFEG meetings followed on from a meeting organised by IBFAN in Geneva in 1995. Although it was recognised that there would sometimes be a need for the provision of small amounts of infant formula in emergency situations, the report of the Geneva meeting¹; identified the need to protect mothers and children in emergencies where breastfeeding may be undermined by indiscriminate distribution of infant formula and other breastmilk substitutes. Recommendations from the Geneva meeting included the continuation of the process of awareness raising and information exchange among interested groups, particularly NGOs involved in emergencies, at national level.

¹ Crucial Aspects of Infant Feeding in Emergency and Relief Situations. July 1996. IBFAN, Geneva.

This document

This document is a collage of the main outputs of the UK IFEG meetings. The contents of this document are intended to add to and support other work in this area. Original work carried out by members of IFEG appears in the body of this document, and other reference information appears as annexes. Different sections of this document are targeted at different audiences, as indicated on the Contents page.

A draft version of this document was also disseminated at the international meeting hosted by IBFAN in Split, Croatia in October 1998 and is now available to other interested agencies and individuals.

Background

The International Code

The International Code of Marketing of Breast-milk Substitutes was adopted by the World Health Assembly (the policy-setting body of WHO) in 1981. The aim of the Code is to 'contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breast-feeding, and by ensuring the proper use of breastmilk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution'²;

² International Code of Marketing of Breast-milk Substitutes, WHO/UNICEF 1981 and subsequent, relevant Resolutions. ([Annex II](#)).

Since 1981, the World Health Assembly has passed a number of Resolutions all of which have equal status with the Code. The Code and subsequent Resolutions aim to ensure that information on infant feeding is not influenced by commercial considerations, and that marketing practices do not undermine breastfeeding. The Code and Resolutions are therefore important safeguards for health workers, parents and infants, including those in emergency and relief situations. IBFAN groups are mandated to monitor the marketing activities of companies that produce breastmilk substitutes.

Why is infant feeding an important issue in emergencies?

The benefits of breastfeeding have been amply demonstrated under non-emergency conditions. Until the age of about six months, an infant who is exclusively breastfed on demand has all the nourishment s/he requires to grow and develop normally, as well as considerable protection against infection. In the conditions characteristic of most emergencies, breastfeeding becomes even more important for infant nutrition and health. The resources needed for safe artificial feeding – such as water, fuel and adequate quantities of appropriate breastmilk substitutes – are usually scarce in emergencies. Artificial feeding in these circumstances increases the risk of diarrhoeal diseases and malnutrition, which in turn substantially increase the risk of infant death.

In an emergency, the adequate supply of appropriate food is obviously of fundamental importance. A common belief is that in emergencies it is infants who are at greatest risk of becoming malnourished – but this is not true of breastfed infants. The ability to breastfeed is robust, even in the face of constraints such as reduced maternal dietary intake and psychological stress. There may, however, be occasions where breastfeeding is not an option for some infants and alternatives are required (see Prioritisation of alternatives for feeding infants, page 23).

Emergencies: the changing scene

The number of refugees and displaced people world-wide is growing, and a high proportion of them are vulnerable mothers and infants. The importance of infant feeding issues in such populations has been highlighted by the recent spate of humanitarian emergencies in middle-income countries, where breastfeeding rates have been in decline for a number of years. In communities where a 'bottle-feeding culture' has taken root prior to the onset of a humanitarian crisis, it is extremely important – but often quite difficult – to protect and support breastfeeding under emergency conditions.

Another feature of the changing humanitarian scene is the emergence of new agencies, sometimes started spontaneously by concerned individuals or small groups. Some of these smaller agencies are active in collecting and delivering donated goods as relief to emergency-affected populations (usually in countries of Central and Eastern Europe and the Former Soviet Union, which are relatively easy to reach by road from Western Europe). Despite their enthusiasm and commitment, some of these newer and smaller agencies lack the in-depth understanding and specialist skills required to deal effectively with infant feeding issues in these settings.

Over the years, there have been numerous incidences of infant formulas and bottles being donated by companies to relief agencies for use as emergency aid. The motives for making and accepting such donations – which might range from the desire to open up new markets, to the wish to improve public relations, to simple altruism – are perhaps less important than their effect on infant feeding practices and infant health in recipient communities.

Although there has been little formal assessment of the impact of infant formula donations, many health workers are concerned about negative effects on breastfeeding. Donations that carry brand names and/or

inappropriate images and/or inappropriate information can undermine breastfeeding and create demand for expensive breastmilk substitutes. Fundraising appeals by NGOs can also have adverse effects; if appeals use images of starving babies and suggest that mothers cannot breastfeed, inaccurate public perceptions of infant feeding issues may be reinforced.

The need to develop policy

Major United Nations agencies and well established non-governmental organisations have developed their own policies relating to the distribution of powdered milk and breastmilk substitutes. However, many other agencies – especially the newer and smaller ones – may be unaware of the relevant issues and the need for such policies. They may measure their effectiveness only in terms of the volume of food they have delivered, without attempting to assess the longer-term impact of their activities on the health of the recipient population.

As agencies become more aware of the harm that can be caused by the inappropriate use of artificial formula, they are likely to see the need for an explicit policy on infant feeding, and may require guidance to develop and implement it. The remainder of this document is one source of such guidance. Other information sources on this topic can be found in Annex III.

A Suggested Policy and Strategy Statement on Infant Feeding in Emergencies

Target audience (uses): Agencies who wish to revise/establish a policy statement in this area. (Can be used as guidance for field programme managers).

This policy statement is intended to give guidance to those who work in humanitarian emergencies, whether they are expatriate or local staff, health professionals or support staff. The statement may be used by organisations or individuals. This statement is concerned with infant nutrition, particularly of those infants aged less than 6 months during humanitarian emergencies. It does not cover complementary feeding, nor does it cover the identification and management of severely malnourished infants in emergencies.

POLICY

Our goal is to ensure that the nutritional, health and psychological needs of infants¹ and young children and their mothers in emergency affected populations are addressed in such a way as to:

- reduce the risk of morbidity and mortality in infancy and early childhood; and
- obtain maximum health benefits from the use of resources available to humanitarian agencies, indigenous health services and affected households.

¹ An infant is a child aged below 12 months. For the purposes of this paper, however, where prime concern is for the period of an infant's life when milk feeding is essential, the term infant is used for those aged below 6 months only. This age coincides with the period for which exclusive breastfeeding is recommended by the World Health Assembly (WHA) in Resolution 47.5, 1994.

Our guiding principles in achieving this goal are:

1. promotion of infant feeding practice that is in the best interests of the child, mother and other carers, based on the best available scientific evidence;
2. recognition of the biological superiority of breastfeeding over artificial feeding, especially in situations of inadequate sanitation and poor health service provision, and of the physiological robustness of lactation (for example, with regard to the effects of malnutrition and stress);
3. recognition of mothers' rights to make and implement decisions regarding infant feeding, together with acknowledgement of the actual and potential role of other members of the

family and the wider society in influencing these decisions and their implementation; and

4. compliance with the International Code of Marketing of Breast-milk Substitutes² and subsequent World Health Assembly Resolutions (the Code), and the Innocenti Declaration.

² Any food being marketed or otherwise represented as a partial or total replacement for breastmilk, whether or not suitable for that purpose (Article 3, International Code of Marketing of Breast-milk Substitutes. WHO, 1981). This includes infant formula, follow-on milks, teas, juices, water and other baby foods when marketed as breastmilk substitutes. [back](#)

In order to achieve our goal in a manner consistent with these guiding principles, we have devised the following strategy.

STRATEGY

What follows is not a menu from which to make selections, but a strategy to be regarded and implemented in its entirety. The three strategic priorities indicated below are all necessary to the achievement of the goals as stated above, and they are all equally important.

(1) Ensure that any action is based on an adequate understanding of the factors affecting infant feeding practice in that particular situation.

This will require thorough assessment and careful analysis of the situation to identify key factors including: pre-emergency infant feeding knowledge and practice; current practice; knowledge and practice on the part of maternity care givers and providers of maternal and child health care; the extent and nature of commercial promotion of breastmilk substitutes; access to breastmilk substitutes (pre-emergency and currently). The assessment should be conducted in close liaison with: local communities, NGO networks, national support groups and emergency committees.

(2) Protect, support and promote breastfeeding and eliminate practices which undermine breastfeeding, by:

- a. raising awareness, increasing knowledge and engendering supportive attitudes across all sections of the humanitarian community – donors, governments, UN organisations, NGOs and local groups alike, as well as in the emergency affected population;
- b. improving the capacity of national health staff and international aid workers to provide mothers and families with accurate information, advice and effective support in choosing and using an appropriate infant feeding method;
- c. ensuring maternity care practice consonant with the UNICEF/WHO Baby Friendly Hospital Initiative's Ten Steps to Successful Breastfeeding (see Annex IV);
- d. raising awareness and improving knowledge of the Code, subsequent WHA Resolutions (the Code) and status of national legislation regarding the marketing of breastmilk substitutes, amongst health workers and aid workers;
- e. monitoring field-level compliance with the Code, subsequent WHA Resolutions and national legislation, and reporting violations to the designated lead agency on nutrition/health or to IBFAN.

(3) Minimise the dangers of artificial feeding to infants and their families, by:

- a. facilitating the acquisition of a regular and sufficient supply of suitable breastmilk substitute by parents/guardians of artificially-fed infants, without undermining breastfeeding;
- b. facilitating the hygienic preparation of artificial feeds by parents/guardians of artificially-fed infants. In every case, this would include strongly discouraging the use of feeding bottles;

c. improving the ability of health services to effectively manage the adverse effects of artificial feeding, especially the increased incidence of severe diarrhoea and respiratory infections in infants.

Activities to Implement Strategy

Target audience (uses): Agency personnel involved in the implementation of policy.

Many agencies advocate a policy of supporting and protecting breastfeeding in emergency and non-emergency situations. However, some recent emergency experiences have highlighted tensions between policy and practice with regard to infant feeding and have demonstrated how policy makers and planners may occasionally need to be better informed by practical circumstances and problem analysis.

Emergency contexts continuously change, creating new sets of circumstances which can challenge efforts to support and protect breastfeeding. High endemic levels of HIV infection, large numbers of unaccompanied minors and a high prevalence of bottle feeding in some emergency settings can create enormous dilemmas for aid workers about which feeding strategy should be supported. There is a need to clarify best practice for aid workers which is in keeping with policy and strategy statements. There is also a need to develop clear prescriptive guidelines. It was beyond the scope of these meetings to develop such guidelines. However, participants endorsed guidelines produced by Kathy Carter of Oxfam (see abstract below), and also recognised the value of the WHO Guiding Principles for Infant Feeding in Emergencies (see [Annex III](#)).

There are a number of different activities broadly outlined in the strategy paper which can be undertaken in order to facilitate the implementation of policy. This section of the document presents practical information which will support the implementation of the IFEG strategy. Depending on the type of agency or the position of the individual these activities will differ widely. For example, practice for an advocacy group may be the dissemination of information to the general public or to targeted groups. The activities of NGOs to translate policy into practice are carried out on a number of different levels, such as training for general or technical staff and specific training for staff working in the field. All of these practices or activities should be seen as belonging to a wider group whose emphasis and focus will change depending on profession, position and organisation mandates.

The Infant Feeding in Emergencies Group (IFEG) has produced supporting material intended for practical use for each of the main points outlined in the strategy paper.

| | |
|---|--|
| IFEG Strategy Paper, p7, point 1 | |
| (1) Ensure that any action is based on an adequate understanding of the factors affecting infant feeding practice in that particular situation. | |
| This will require thorough assessment and careful analysis of the situation to identify key factors including: pre-emergency infant feeding knowledge and practice; current practice; knowledge and practice on the part of maternity care givers and providers of maternal and child health care; the extent and nature of commercial promotion; access to breastmilk substitutes (pre-emergency and currently). | |
| IFEG activity | a) To support and refer to <i>Feeding in Emergencies for Infants Under Six Months – Practical Guidelines</i> by Kathy Carter (below). |

An abstract from:

a) Feeding in Emergencies for Infants Under Six Months – Practical Guidelines

These guidelines will be of use to health and nutrition personnel in agencies both at headquarters and at field level, particularly in situations where there has been a significant percentage of infants dependent on breastmilk substitutes (BMS) prior to the emergency. An initial discussion of the benefits of breastfeeding and factors which may affect breastfeeding is followed by an emphasis on the practicalities of appropriate intervention in order of priority. There is a comprehensive and detailed guide for the assessment of infant feeding practices in emergencies. Next there is a section on appropriate breastfeeding support covering policies, training, camp planning and management, the new-born, relactation, wet-nurses, milkbanks and breastfeeding promotion. Last is a section on appropriate support for carers of infants using BMS, including

requirements for safe BMS feeding and distribution of BMS. A list of key texts is included. Requests for copies of the guidelines and/or comments on its use should be made to Judith Appleton, Emergency Department, Oxfam.

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| IFEG activity | b) To highlight relevant and recent information on HIV and infant feeding and to comment briefly on these. |
|---------------|---|

B) HIV and infant feeding

Target audience (uses): Field workers programme planners and managers, policy makers and researchers (for information).

In an emergency situation the following information must be taken into account before an appropriate infant feeding strategy is determined:

- assessment of the prevalence of HIV in the affected population using secondary sources (including pre-emergency estimates) and relevant information from health information systems;
- assessment of the knowledge of HIV status: were voluntary counseling and testing facilities available pre-emergency? Are there such services available now?
- relevant policies on infant feeding and HIV, from the host and/or home countries.

Breastfeeding is the optimal way to feed an infant in the majority of circumstances. However, studies to date show that breastfeeding can be a route of HIV transmission; 1 in 7 children born to and breastfed by mothers living with HIV become infected by breastfeeding. Mothers, health workers and policy makers are faced with a dilemma concerning decisions about infant feeding. There have been many developments recently regarding HIV and infant feeding. Most importantly, WHO, UNICEF and UNAIDS published three documents:

1. HIV and Infant Feeding: Guidelines for Decision Makers (WHO/FRH/NUT 98.1 UNAIDS/98.3)
2. HIV and Infant Feeding: A Guide for Health Care Managers and Supervisors (WHO/FRH/NUT 98.2 UNAIDS/98.4)
3. A Review of HIV Transmission Through Breastfeeding (WHO/FRH/NUT 98.3 UNAIDS/98.5)

The new guidelines are being piloted in eleven countries around the world. At the same time, a number of research projects are underway examining various aspects of mother-to-child transmission of HIV.

IFEG wish to make the following points on the subject:

The guidelines have stimulated a great deal of controversy for a number of reasons, primarily to do with cost, feasibility and appropriateness. They also present a shift in policy by emphasising the use of artificial baby milk for mothers tested and found to be infected with HIV.

Although the guidelines stress the right of mothers to make an informed choice about how to feed their baby (without influence from commercial pressure), there is as yet a great deal about which there is little information. In particular:

- the timing of transmission of the HIV virus through breastmilk;
- the relationship between maternal vitamin A status, HIV viral load in breastmilk, maternal CD4 blood count and risk of transmission;
- the relative risks of artificial feeding and breastfeeding outside a research environment, for

infants born to HIV positive mothers in resource-poor contexts;

- the relationship between infant gut development, stomach acidity and virus absorption;
- the relative risk between breastfeeding/wet-nursing and artificial feeding among HIV positive women in emergencies.

Furthermore, the IFEG is concerned that, in resource-poor settings, the preparation of infant formula is not a safe alternative to breastmilk. It is also expensive, even if it is subsidised.

UN guidelines emphasise the need to avoid the use of formula milk intended for positive mothers by those who are not infected with HIV or who are of unknown status (referred to as 'spill over'). This is particularly pertinent to emergency situations where very few women, if any, will be aware of their HIV status.

IFEG would like to reiterate the following points:

- breastfeeding is recommended for infants born to women who are HIV negative or of unknown HIV status;
- breastmilk substitutes may be a preferable option for infants born to women infected with HIV who are aware of their positive status. However, for this to be true, the risks arising from artificial feeding must be less than the risks of HIV transmission through breastfeeding;
- the need to protect mothers from becoming infected with HIV, must remain a priority.

The IFEG is concerned that breastmilk substitutes may be inappropriately targeted to infants for whom breastfeeding is still the optimal feeding option. It is essential that in all circumstances the International Code of Marketing of Breastmilk Substitutes and subsequent resolutions are adhered to.

for further information, including comments on the UN Guidelines, contact: Baby Milk Action, Save the Children or the nutrition sections of WHO and UNICEF.

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| Strategy paper p7, point 2a | |
| (2) Protect, support and promote breastfeeding and eliminate practices which undermine breastfeeding, by: | |
| a. raising awareness, increasing knowledge and engendering supportive attitudes across all sections of the humanitarian community – donors, governments, UN organisations, NGOs and local groups alike as well as in the emergency affected population; | |
| IFEG activities | IFEG designed two leaflets for specific target groups (see contents page): a. Fact Sheet (for format suitable for duplication contact the ENN) b. Advertorial |

Fact Sheet

Target audience (uses): Non-technical agency personnel e.g. desk officers and fundraisers. Health and community workers in emergencies.

AD HOC GROUP ON INFANT FEEDING IN EMERGENCIES FACT SHEET

Why is infant feeding an important issue in emergencies?

- nutrition is closely linked to an infant's health and survival, in the short and long-term;
- a child's early nutrition will affect his/her later growth, health and mental development;
- infant feeding practice offers the first bonding between mother and baby.

This paper outlines how infant feeding practices in emergencies are an important determinant of health, growth and survival outcomes. In nearly all contexts, breastfeeding is the most beneficial form of feeding for both mother and baby and as such, measures should be taken to protect, promote and support it.

What are the benefits of breastfeeding?

Apart from breastmilk providing a well balanced and complete diet for infants it also has other benefits:

- it protects against disease and infections, in both baby and mother;
- it protects against allergies in babies;
- breastfeeding immediately after birth reduces the risk of maternal haemorrhage;
- exclusive breastfeeding for the first six months of life delays the return of fertility, acting as a natural method of birth spacing;
- it is free, pre-warmed, clean and safe, and immediately ready on demand;
- it is environmentally friendly (requires no fuel, packaging or waste disposal);
- breastfeeding is a sustainable feeding method, giving the mother control.

What are the risks of artificial feeding?

The use of breastmilk substitutes should be discouraged in emergencies because:

- of the increased risk of sickness:
 - i) contaminated milk or equipment causes diarrhoea and may lead to malnutrition and death. It is difficult to ensure sterilisation of feeding equipment, especially in an emergency when fuel and cooking utensils may be scarce;
 - ii) breastmilk substitute offers no protection against infection or allergies as it does not contain the anti-infective agents that are normally passed from mother to baby in breastmilk;
- it is expensive. If the carer cannot afford to buy breastmilk substitute they may over dilute the formula or use other unsuitable ingredients;
- an uninterrupted supply of breastmilk substitutes cannot be guaranteed in an emergency;
- use of breastmilk substitutes decreases the production of breastmilk, as the mother is receiving less stimulation to produce milk.

What are the principles of good infant feeding?

- at birth, attach baby to breast – the initial colostrum includes important protective agents (immunoglobulins) which enhance gut performance;
- the baby should be positioned well (facing the mother, with the baby's tummy against its mother's) and the nipple reaching the back of the baby's mouth (good attachment), for the suckling reflex to work properly;
- mothers and babies need to learn how to breastfeed, it is not automatic. Relatives, other mothers and health staff can offer important support to new mothers to make sure things go well;

- ensure the baby empties one breast before feeding from the other. The first part of a feed is more watery, quenching thirst; milk becomes gradually richer through the feed, relieving hunger. The more the baby suckles, the more milk is produced;
- breastfeed exclusively – there is no need to give additional fluids, not even water;
- a mother can produce enough milk to feed twins or even triplets – as long as the babies suckle well;
- bottle feeds should not be given as this might confuse the baby's technique (suckling is not the same as sucking).

What are some common misconceptions about breastfeeding?

There are a number of beliefs, often deeply-held, which are usually misplaced:

“stress prevents mothers from producing milk”

Stress does not necessarily prevent a mother from producing milk.

If a stressful situation prevents a mother from putting her baby to the breast often enough, then her milk supply will be affected. In acute situations the reflex to release milk from the breast may become interrupted temporarily. Otherwise there is no reason why a mother is unable to breastfeed her baby, even in times of stress, in fact at such times breastfeeding can be therapeutic for the mother. Interventions to support breastfeeding mothers, and mitigate stress factors as far as possible, should be encouraged.

“malnourished mothers cannot breastfeed”

Other than in severe cases, malnourished mothers can breastfeed.

Moderate malnutrition has little or no effect on milk production. In fact, the mother will continue to produce milk, even to the detriment of her own wellbeing.

“mother thinks she is not producing enough milk to feed her baby”

A mother does produce enough milk to feed her baby.

The misconception may arise from a mother's perception (e.g. because a breastfed baby's growth, especially after the second or third month, is slower compared to the reference population, which is based on the growth of bottle-fed babies); or it may be real. If real, it is probably a result of poor attachment or insufficient suckling. Once corrected, milk supply will improve. Milk production works on a supply-and-demand basis: as long as the baby is put to the breast, is well attached and is allowed to suckle as often as it demands, supply will meet all the baby's needs.

“stop feeding if the baby has diarrhoea”

Do not stop feeding if the baby has diarrhoea.

Not only does breastmilk contain water to replace losses through diarrhoea, it also supplies important minerals and vitamins to help prevent dehydration, as well as proteins to help strengthen the immune system of the baby. In serious or prolonged cases rehydration therapy may be required.

“babies need extra fluids such as tea or water”

Breastmilk provides all the fluids a baby needs.

Breastmilk contains the exact amount of water to replace losses through diarrhoea, and other nutrients that a baby needs even in the hottest, driest climates. The fluid in breastmilk is also better absorbed than any other type of fluid.

“only women with large breasts or nipples can breastfeed”

All women can breastfeed.

The key to effective breastfeeding is a good suckling technique – this has nothing to do with breast size or nipple shape or size.

“colostrum should not be given to the new-born”

Colostrum, the first milk, is an important source of early nutrients as well as anti-infective agents.

Colostrum also helps improve gut performance.

“once stopped, breastfeeding cannot be re-started”

If a mother stops breastfeeding she can usually restart.

Relactation can take time but is usually possible. The most important factors are:

- i) the mother's willingness to breastfeed again, and
- ii) addressing the reasons why she stopped in the first place

The mother should put her baby to the breast regularly (at least every 2–3 hours). Feeding can continue with breastmilk substitutes on a diminishing scale while the relactation process takes place.

“infant formula is superior because it's based on science”

Formula milk is an inferior option for babies and their mothers.

The optimal food for infants, and the best mode of feeding, is human milk suckled from the breast. Formula is probably the best alternative in the absence of breastmilk.

What can be done for babies not being breastfed?

In certain circumstances, it might be necessary to consider options other than maternal breastfeeding. These situations may include:

- Orphaned babies or babies that have become separated from their parents.
- A very sick mother, who may be unable to breastfeed her infant for some time. In this case it may be necessary to provide other support (see below). It should, however, be the intention to re-start lactation as soon as possible in the mother's recovery period.
- Mothers who choose not to breastfeed: this may be linked to cultural beliefs or societal norms and pressures.

In such situations, other options might be available and appropriate:

- wet nursing or relactating relatives (i.e. breastfeeding, but not by the mother);
- using pasteurised human milk from banks (which may have been established prior to the emergency);
- using breastmilk substitutes fed with a cup.

Reducing risks associated with artificial feeding

When circumstances arise where breastfeeding is not practiced, it is imperative that any measures taken do not undermine the principle that breastfeeding is superior. To this end:

- breastfeeding should continue to be protected, promoted and supported in the wider community;
- ensure an adequate and steady supply of water, fuel and soap for adequate hygiene;
- where possible, generically labeled infant formula should be used, to avoid unnecessary promotion of a commercial brand;
- ensure a steady and adequate supply of formula;
- provide cups rather than bottles since these are easier to keep clean and do not interfere with the baby's suckling reflex.

The “International Code of Marketing of Breastmilk Substitutes”

The International Code, and subsequent World Health Assembly Resolutions have been adopted by national governments at the World Health Assembly to protect breastfeeding from commercial interests. Manufacturers of breastmilk substitutes have agreed to adhere to the Code. The Code and subsequent Resolutions aim to ensure that the marketing practices of manufacturers do not exploit an emergency situation for commercial gain.

Issues such as advertising (Article 5) and information materials for mothers and health workers (Article 4); labeling of formula packaging (Article 9); and free and low cost supplies in emergencies (WHA Resolution 47.5, 1994) are all covered.

In emergency relief operations, breastfeeding for infants should be protected, promoted and supported. Any donated supplies of breastmilk substitutes (or other products covered by the Code) may be given only under strict conditions (if infant has to be fed with breastmilk substitute); the supply is continued for as long as the infants concerned need it; and the supply is not used as a sales inducement.

(WHA Resolution 47.5, 1994)

For further information see Sokol, 1997 (see [annex III](#)).

Advertorial

Target audience (uses): General public (Can be placed in newspapers/magazines in donor countries during large scale appeals).

During emergencies inappropriate and harmful feeding practices are often initiated and supported through donations of infant formula from the general public in response to emergency appeals. Such interventions are often borne out of a genuine though misguided wish to help. The IFEG felt therefore that some attempt should be made at educating the general public. The following advertorial was designed to inform, and provide some guidance to the general public.

We often encounter emergency appeals which highlight images of babies and young children. We may worry that these babies and children will starve unless we (or the agencies appealing for assistance) donate infant formula.

On the other hand, we all know that breastfeeding is best for babies. What many of us do not realise is that this is especially true in emergency situations.

Imagine yourself in a refugee camp, or as a victim of natural disaster. Basic supplies are scarce, there is no clean water, and firewood for cooking is a day's walk away. Conditions are crowded and dirty; infection is rife. And your baby is screaming to be fed.

Q. How do you make up a bottle of powdered milk properly in this situation?

A. You can't – but if you're breastfeeding your baby, you don't need to!

Breastfeeding provides complete nutrition for babies. It is safe, clean and free of charge. It also acts as baby's first vaccination, helping to protect against infection. This explains why the risk of illness and death is many times higher for artificially fed babies, and why the risk tends to increase in emergencies.

In emergencies, it is more helpful to feed mothers and help them to breastfeed than to send tins of infant formula. Next time you are asked to respond to an emergency appeal, ask about the agency's policy on infant feeding, and give generously to those that support breastfeeding!

For more information, contact:

[Complete as appropriate]

| | |
|-----------------------------------|---|
| IFEG Strategy Paper, p7, point 2b | (2) Protect, support and promote breastfeeding and eliminate practices which undermine breastfeeding, by: improving the capacity of national health staff and international aid workers to provide mothers and families with accurate information, advice and effective support in choosing and using an appropriate infant feeding method; |
| | IFEG has compiled information on training courses for NGO personnel (see annex V). |
| IFEG Strategy Paper, p7, point 2e | c. ensuring maternity care practice consonant with the UNICEF/WHO Baby Friendly Hospital Initiative's Ten Steps to Successful Breastfeeding; |
| | See annex VI for UNICEF/WHO Baby Friendly Hospital Initiative's Ten Steps to Successful Breastfeeding. |
| IFEG Strategy Paper, p7, point 2c | d. raising awareness and improving knowledge of the WHO Code, subsequent WHA Resolutions and status of national legislation regarding the marketing of breastmilk substitutes, amongst health workers and aid workers; |
| | The most important parts of the Code and subsequent Resolutions, which relate to infant feeding in emergencies, are outlined at Annex II . |
| IFEG Strategy Paper, p7, point 2d | (2) Protect, support and promote breastfeeding and eliminate practices which undermine breastfeeding, by: e. monitoring field-level compliance with the Code, subsequent WHA Resolutions and national legislation, and reporting violations to designated lead agency on nutrition/health or to IBFAN. |
| | Monitoring practice: NGOs can help make sure that field practice complies with the Code, by ensuring that all of their staff are aware of the Code and Resolutions, and encouraging field staff to report any instances of violations. The export of branded baby milk with labels in an incorrect language, for example, contravenes EC Directives and Resolutions and should be reported to the appropriate authorities and the European Commission. Another example might be the unregulated and unsupervised distribution of milk products which may undermine breastfeeding. IBFAN monitors compliance with the Code, but does not have a direct role in the delivery of emergency relief assistance. |
| IFEG Strategy Paper, p7, point 2e | (3) Minimise the dangers of artificial feeding to infants and their families, by: a. facilitating the acquisition of a regular and sufficient supply of suitable breastmilk substitute by parents/guardians of artificially-fed infants, without undermining breastfeeding. |
| | IFEG developed tools to assist field workers target breastmilk substitutes appropriately: a) Feeding Infants Under Six months in Emergencies: A Triage Approach To Decision Making |

Feeding Infants Under Six Months in Emergencies: A Triage Approach To Decision Making

Target audience (uses): Field workers (to appropriately target infant feeding advice and interventions).

Until recently, the numbers of children under six months old who have not had access to breastmilk during emergencies have been very few. This remains true for the African context. Yet this small number of children have often posed major difficulties for emergency workers who have lacked a clear framework which allows a comfortable marriage of policy and practice for dealing with this group. In some cases, the existence of a few children who could not be breastfed has given rise to the importation and distribution of large amounts of formula which once available on the markets, has had the knock on effect of adversely influencing feeding practices in the community in general. More recently, with emergencies occurring in Eastern Europe and the Middle East where the prevalence of breastfeeding has been low to begin with, the problems associated with how to appropriately manage infants who do not have access to breastmilk have been increasingly highlighted.

There are several factors which may complicate decisions about optimal feeding practices in emergencies. These may create uncertainties for relief workers about the most appropriate management strategies for feeding infants under six months of age. The following factors have been described in recent emergency situations:

- mothers complain of having no milk
- mothers were not breastfeeding prior to the emergency
- breastfeeding practices changed during the crisis
- some breastfeeding infants appear to be malnourished
- wet nursing is not acceptable due to cultural taboos or HIV prevalence
- infants are orphaned bottle feeding is the norm

<Not available>

Twins... no problem! (UNICEF/Sonny Yabao)

Before appropriate management can be undertaken it is necessary to correctly identify groups of infants for whom breastfeeding is problematic and the reasons behind the problem. It should then be possible to correctly identify the small group of infants out of this population for whom breastfeeding is not a realistic option. Correct categorisation of this latter group will help define the size of the problem and should lead to the identification of alternatives. This will also protect those for whom breastfeeding is a realistic option from misclassification on the basis of incorrect assumptions.

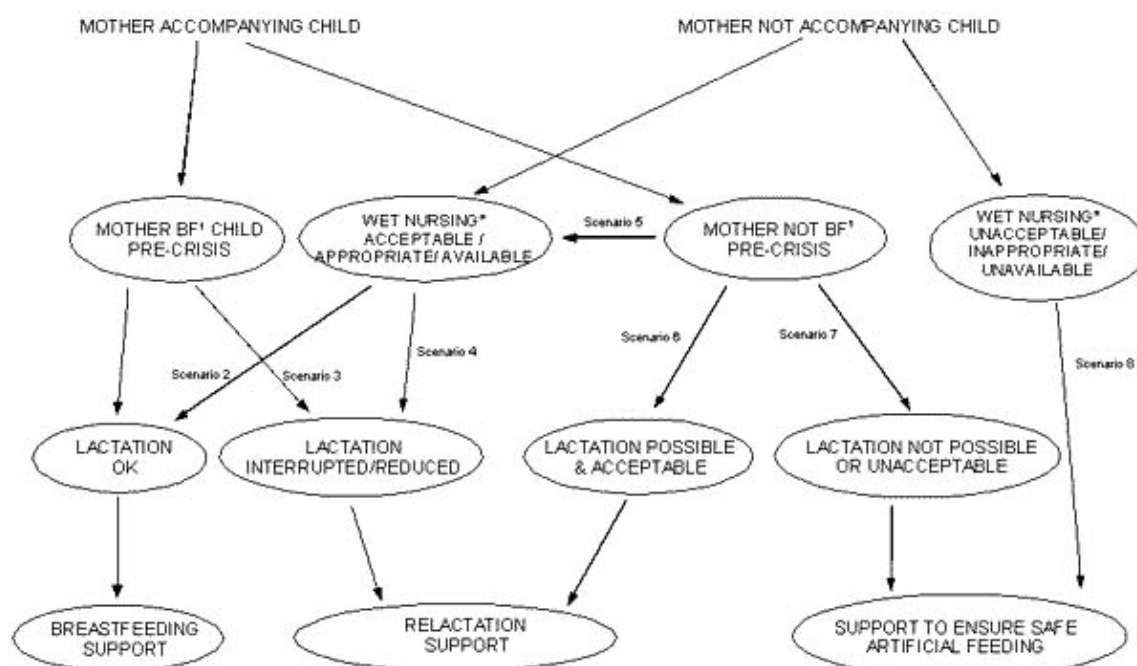
Triage is an act of sorting or categorising. This can be carried out from the moment the carer and child come in contact with the health care worker providing emergency relief. The triage/sorting framework proposed here was driven by 'optimal feeding' considerations for infants under six months. There is no attempt to identify or treat severe malnutrition among this age group. There are a number of reasons for this approach:

- i) the method of feeding infants under 6 months of age is critically linked with child survival;
- ii) there are uncertainties over:
 - the best way to measure malnutrition/growth retardation in infants < 6 months
 - whether the primary determinants of growth retardation are intra or extra-uterine factors
 - how to measure and identify in the emergency context whether catch-up growth is occurring
 - what is best practice for treatment of severely malnourished infants < 6 months

The main objectives of constructing a triage framework are:

- i) to assist decision making about optimal feeding practices at field level;
- ii) to encourage discussion of possible scenarios in the development and planning stage of a programme, thereby enabling agencies to be adequately prepared in terms of what kind of personnel, training and resources will be necessary.

It should be recognised that there is a hierarchy of feeding options available once infants are correctly classified into the appropriate feeding management group (see Prioritisation of Alternatives for Infant Feeding in Emergencies).



Feeding Infants Under Six Months in Emergencies: a Triage Approach to Decision-Making

• For all situations of artificial feeding:

- (i) never use bottles – use cup; and
- (ii) monitor and report activities which break the Code and Resolutions

• Maternal nutrition is very important to all breastfed infants not only in terms of energy and proteins but also all the micronutrients. In situations where there is a dependence on a general ration, the <6 month old infant's ration should be given to his/her lactating mother

***The practice of wet nursing may be unacceptable or inappropriate in situations of high HIV prevalence where testing, support and counseling are not available. (see WHO/UNICEF/UNAIDS, 1998 for more details)**

¹ BF = Breastfeeding

| Scenario 1 | | |
|--|--------------------------------------|--|
| Mother accompanies the child: was breastfeeding prior to the emergency and has continued to breastfeed. There has not been an interruption in milk supply or a reduction in quantity. | | |
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <u>1.1 Breastfeeding support</u> | <u>1.2 Breastfeeding support – as 1.1 and additionally</u> |

| | | |
|--|---|---|
| | <ul style="list-style-type: none"> • advice & encouragement • promote good maternal Nutrition | <ul style="list-style-type: none"> • clinical examination for presence of disease • treatment of disease • regular monitoring including growth monitoring until normal weight gain is identified • if the infant is unwilling to suckle employ methods in 2.1 |
|--|---|---|

Scenario 2
Mother does not accompany the child, but a wet nurse* is available and willing. There has been no interruption in lactation.

| | | |
|--------------------------------|--|---|
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <p><u>2.1 Breastfeeding support as 1.1 and additionally</u></p> <ul style="list-style-type: none"> • if there has been a period when the infant has not been suckling or where there was a change in feeding practice, patience and perseverance may be required to re-teach the infant how to suckle • the infants age and intake of complementary foods can also affect willingness to breastfeed, complementary foods if appropriate should be introduced after periods on the breast | <p><u>2.1 Therefore manage as 1.2 and additionally</u></p> <p>Because the infant has been separated from the mother, the period of separation and the feeding practices during separation must be assessed. It is possible that under-nutrition has occurred as a result of inappropriate feeding practices. Infection/disease may also be the cause of the infants current status.</p> <ul style="list-style-type: none"> • ensure that the infant is suckling and receiving adequate amounts of breastmilk • if the infant is unwilling to suckle it may be necessary for the wet nurse to express breastmilk which can be fed by cup to the infant at 150ml/kg/day in 8 to 10 feeds daily • the infant can be encouraged to suckle by giving the expressed BM by dropper or feeding tube while the infant is at the breast. |

Scenario 3
Mother accompanies the infant, has breastfed pre-crisis but has experienced an interruption or a reduction in milk supply.

| | | |
|--------------------------------|---|---|
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <p><u>3.1 Relactation support¹</u></p> <p>While the mother's milk supply is becoming established and while the infant is learning to suckle it is of the utmost importance to ensure that the infant receives adequate</p> | <p><u>3.2 Rehabilitate the infant and support relactation</u></p> <p>The infant may be malnourished as a result of the interruption or reduction in lactation. While the mother's milk supply is becoming</p> |

| | | |
|--|---|---|
| | <p>nutrition. To give supplements in larger quantities or for a longer time than absolutely necessary is preferable than reducing them too much or too quickly.</p> <ul style="list-style-type: none"> • examine and treat disease if necessary • ensure that the mother is receiving an adequate diet • estimate infants daily requirements (150mls of full strength BMS/kg/day) • if infant is willing to suckle, supplement pasteurised BM or BMS with cup after suckling • assess <ul style="list-style-type: none"> • intake • urination: frequency and intake • activity level • feeds vigorously • weight gain – at least 125grams per week • reduction of supplements should be done cautiously, by no more than 50mls in a 24 hour period. Continued weight gain with supplement reduction indicates that the milk supply is being re-established. • continue like this until supplementation is no longer necessary. | <p>established and while the infant is learning to suckle priority must be given to the infant's adequate nutritional intake.</p> <ul style="list-style-type: none"> • Examine for and treat disease if present • Start by giving the infant full nutritional requirements in addition to each breastfeeding session, continue as 3.1 |
|--|---|---|

Scenario 4
Infant is unaccompanied by mother, however there is a willing wet-nurse who has experienced an interruption or reduction in breast milk supply

| | | |
|--------------------------------|--|---|
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <u>4.1 Relactation support</u> As above 3.1 ensuring wet-nurse receives an adequate diet. | <u>4.2 Rehabilitation and Relactation support</u> As above 3.2 ensuring wet-nurse receives an adequate diet. |

Scenario 5
Mother accompanying infant, she was not breastfeeding pre-crisis. However a wet nurse is available and this arrangement is acceptable.

| | | |
|---|---|--|
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <u>5.1</u> Manage as 3.1 | <u>5.2</u> Manage as 3.2 |
| Scenario 6 <i>Mother accompanies infant, BF had not been established pre – crisis or there has been a gap in lactation. However, lactation is possible and acceptable</i> | | |
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <u>6.1</u> Management: lactation support as 3.1 | <u>6.2</u> Management: lactation support as 3.2 |
| Scenario 7 <i>Mother accompanies child was not breast feeding pre–crisis, lactation is unacceptable or not possible</i> | | |
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| Management: | <u>7.1 Support to limit risk associated with artificial feeding</u> <ul style="list-style-type: none"> • if breastmilk is available through milk banking this should be used otherwise a BMS (see hierarchy for appropriate BMS) • ensure mother has access to a constant supply of BMS and necessary items e.g. fuel necessary for preparation ensure mother knows safe hygienic method of preparation • ensure mother is aware of the dangers associated with artificial feeding • monitor closely preparation method as well as infant weight gain and infants disease status | <u>7.2</u> Examine for and treat disease if present and continue as 7.1 |
| Scenario 8 <i>Infant unaccompanied by mother, wet nursing not available or unacceptable</i> | | |
| Infant characteristics: | Normal well nourished healthy infant | Clinically undernourished / unhealthy infant |
| | The most significant element of unaccompanied infant’s survival is care. A carer must be found who is interested in the child’s survival. The carer should be given the advise and support required to take care of the infant. Carers should not be motivated to care for children for financial or commodity gain. | |
| Management: | <u>8.1</u> Manage as 7.1 | <u>8.2</u> Manage as 7.2 |

* The practice of wet nursing may be unacceptable or inappropriate in situations of high HIV prevalence where testing, support and counseling are not available. (see WHO/UNICEF/UNAIDS, 1998 for more details)

Please Note that: BM = breastmilk, BMS = breastmilk substitute.

¹ For more on Relactation support see [annex VIII](#)

Prioritisation of alternatives for infant feeding in emergencies

Target audience (uses): Field workers, programme planners and managers (to guide programme implementation and allow preparation of appropriate stocks).

| |
|--|
| 1 Breastfeeding |
| 2 Wet-nursing* |
| 3 Breastmilk from Milk Bank |
| 4 Generically packaged infant formula |
| 5 Locally purchased branded formula |
| 6 Stop-gap home-made recipes |

*The practice of wet nursing may be unacceptable or inappropriate in situations of high HIV prevalence where testing, support and counseling are not available (see WHO/UNICEF/UNAIDS, 1998 for more details).

Breastfeeding is the first and best feeding option for infants. No other food or liquid is required during the first 6 months of life – especially in emergency situations.

Other, less preferable, feeding options may be appropriate in certain circumstances. These are, in decreasing order of preference – wet nursing (where HIV risk is not high), and breast milk from a milk bank. If neither of these options is possible or acceptable, the next least dangerous option is provision of generically labeled infant formula with clear instructions on safe preparation. Agencies working in the area of infant feeding should have supplies of such formula for the small number of infants requiring it. Contact details of companies producing generically labeled infant formula can be obtained from Baby Milk Action (see annex I). Should interruptions in the generic supply occur it may be necessary to buy commercially labeled formula on the local market. As a very last resort and only when it is not possible to undertake any of the above options, home-made recipes may be considered (see annex VI). These lack key micro-nutrients that are necessary for adequate development and should therefore only be given for a few days until one of the other feeding options can be established.

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Mother breastfeeding twins. Mapel, South Sudan '98 (L. Gostelow)

| | |
|-----------------------------------|---|
| IFEG Strategy Paper, p7, point 3b | (3) To Minimise the dangers of artificial feeding to infants and their families, by: b. facilitating the hygienic preparation of artificial feeds by parents/guardians of artificially-fed infants. In every case, this would include strongly discouraging the use of feeding bottles. |
| IFEG activity | Regarding this strategy point, Prof. Mike Golden contributed the following letter on cup feeding. |

Cup Feeding

Target audience (uses): Field workers (to guide practice).

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Three healthy breastfed generations in an Indonesian village (WHO/J.Ling)

I have experience of both methods and am convinced that cup and saucer regimens are better. The possibility of inhalation pneumonia in the recovering severely mal-nourished child has concerned me for years. There is no information in the literature on lung function or aspiration pneumonia in the severely malnourished child at any stage of recovery. Nevertheless, examination shows that a very high proportion have stigmata of chronic chest disease, almost certainly due to repeated bouts of pneumonia, that could easily be precipitated by inhalation. There is a need for pulmonary physiological studies (lung-function tests) in children with severe malnutrition – if any one is interested in such a study please get in touch with me.

The practice that we followed since 1956, in Jamaica, has been to use a cup and saucer, without a spoon, for the liquid feeds; spoons and bowls were used for solid food later in recovery. Choking and inhalation were more common in later recovery when solid food was given by spoon than when milk was given by cup only.

There is a definite technique to feeding a malnourished child properly. It is not taught to the people who either train the local staff or to the mothers. The critical thing is to have the child physically on the lap of the person feeding the child, held securely in a "cuddle" against the chest, facing forward in an upright posture, with the mother's left arm encircling the child and holding the saucer under the chin. The right hand holds the cup for the child to drink. Any "dribbles" are collected in the saucer and returned to the cup. The most important thing is to teach the mothers how to hold their children during feeding and to have someone who is properly trained watching the children as they are fed.

With a spoon and cup there are several problems that I have repeatedly witnessed.

1. The feeding is very slow. This is a major difficulty because one of the main functions of the attendants is to watch the children during feeding. Such surveillance is critical to ensure that the child gets the food and to assess the child's appetite. Rates of recovery improve with adequate surveillance as less is taken by the mother, none is shared with other siblings and more can be offered where the patient is hungry making feeding "to appetite" a reality.
2. There is a lot of spilt food. A lot of the milk "dribbles" down the front of the child and is lost. Investigation of poor weight gain, despite high calculated intakes, shows that up to a third of the meal can actually be spilt with improper feeding. Test weighings with the cup only method (weigh both the cup and the child before and after the feed), where a saucer below the chin catches the dribbles, gives a measured loss of just under 10%. With a spoon or with self-feeding the losses are much higher.
3. The child is often left to take the food him/herself. This is perhaps the most damaging feature of the spoon and cup. The child is not being cuddled and held during feeding and actively encouraged by the mother. Feeding is one of the most important times to show love and to psycho-socially stimulate the child – to talk to the child and have bodily contact.
4. Damage may occur during force feeding. If the child is reluctant to eat then the mother or aide frequently attempt to force the child's mouth open by pinching the cheeks, holding the nose and/or forcing the spoon between the lips. A spoon causes much more trauma to a child's mouth than a cup. I have seen children with stomatitis receive quite deep cuts in their mouths from spoons.
5. It is during force feeding that inhalation is most likely to occur. As force feeding is much easier with a spoon than a cup, it is my experience that inhalation pneumonia is more common following feeding with a spoon (both food and medicines) than with a cup only.

Going round Therapeutic Feeding Centres in West Africa, where cups and spoons were being used, I demonstrated to the local staff and mothers how to feed their children with a cup and saucer. They have all since reported back that they find this method to be better, problems that they had, have resolved and weight gains have improved.

I would like to hear from those who have a different practical experience from mine; such practical aspects of feeding the child are very important but have never been satisfactorily addressed by scientific investigation.

For further discussion on this subject contact Prof. Michael H.N. Golden, Department of Medicine and Therapeutics, University of Aberdeen, Foresterhill, AB25 2ZD, Scotland, (UK). E-mail: m.golden@abdn.ac.uk

(See also [Annex VIII](#))

Monitoring & Evaluation

Target audience (uses): Programme planners and managers

Indicators for monitoring progress and evaluating impact of interventions to improve infant feeding in emergencies.

We can think of a programme as a specific set of activities that are all directed toward one or more defined objectives.

Decisions regarding programme objectives are often informed by pre-existing evidence that meeting these objectives will contribute to an overall goal.

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For example, the objective of a programme to support and promote breastfeeding in a hospital maternity unit might be to increase the proportion of infants who are exclusively breastfed at discharge. The overall goal of the programme might be to reduce morbidity in infancy and to reduce expenditure by the hospital on the treatment of diarrhoea.

In order to assess progress in implementation of a programme and the extent to which the objectives of the programme are achieved, we need measurable indicators. Change in these indicators over time (usually before, during and after implementation of a programme) enables us to gauge the success of a programme.

We can distinguish three types of indicator: process indicators, outcome indicators and impact indicators. Process indicators measure the extent to which planned activities are taking place. Outcome indicators measure the extent to which programme objectives are being met. Impact indicators measure the extent to which the overall goals of a programme are achieved.

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When there is robust evidence that particular goals can be achieved by meeting certain objectives (e.g. in the example of the hospital breastfeeding promotion programme, evidence that exclusive breastfeeding in early infancy reduces diarrhoeal morbidity), it is not usually considered necessary to measure impact (e.g. incidence of diarrhoea) as this can be inferred from changes in outcome indicators (rates of exclusive breastfeeding).

Clearly, outcome indicators are the key to determining whether the programme has done what it set out to do. It is also important to measure process indicators, because if outcome indicators fail to improve, process indicators can provide clues as to why (i.e. whether planned activities were not effective in meeting objectives, or whether they simply were not implemented as planned). In the example of the hospital breastfeeding promotion programme, process indicators could include the frequency and duration of contact between mothers and lactation counsellors. It is important to be explicit about both objectives and indicators when designing a programme, i.e., decisions on which indicators to use must be made before implementation begins.

For any emergency intervention with the goal of improving infant survival and health, appropriate impact indicators would include infant mortality and morbidity. In other words, these same impact indicators would be appropriate for any interventions involving breastfeeding or artificial feeding or both. As explained above, however, it is not always necessary to actually measure impact – and in some situations it is not practical anyway. The emphasis should instead be on measuring appropriate process and outcome indicators. For programmes involving infant feeding, these will differ according to the programme objectives. Examples are shown in the table below (NB: this is not an exhaustive list of all possible indicators, nor should it be seen as prescriptive or universally applicable; choice of indicators will vary from one programme to another).

| | |
|--|--|
| GOAL (with examples of impact indicators) | |
| <u>improve infant health and survival</u> (diarrhoeal disease incidence; infant mortality rate) | |
| ? | |
| Programme objectives (with examples of outcome <i>indicators</i>) | |
| support and promote breastfeeding (% of babies breastfed within 1 hour of delivery; % of babies exclusively breastfed at 1 month; % of babies exclusively breastfed at 3 months; average age at introduction of complementary foods; % of babies breastfed at 6 months; % of babies breastfed at 12 months) | improve artificially fed babies' access to adequate and safe supplies of breastmilk substitutes (BMS) (% of artificially fed infants who regularly consume adequate quantities of hygienically prepared BMS) |
| ? | |
| Activities (with examples of <i>process indicators</i>) | |
| <ul style="list-style-type: none"> • <u>train maternity care staff and other birth attendants</u> (% of maternity staff/ birth attendants trained) • <u>deploy breastfeeding counsellors in health facilities and in community</u> (no. of breastfeeding counsellors deployed; no. of mothers counselled) • <u>promote formation of mother-to-mother support networks</u> (no. of mothers joining mother-to-mother networks) • <u>provide education on breastfeeding through health facilities and in community</u> (% of mothers and % of general population receiving or recalling key messages) • <u>provide food supplements to breastfeeding mothers (as incentive to breastfeed)</u> (% of breastfeeding mothers who regularly receive food supplements) | <ul style="list-style-type: none"> • <u>identify and register artificially fed babies and their carers</u> (no. of artificially fed babies registered) • <u>distribute BMS to carers of artificially fed babies</u> (quantity of BMS distributed per baby; regularity of BMS distribution) • <u>distribute fuel, feeding cups and soap to carers of artificially fed babies</u> (quantity of fuel distributed per baby; regularity of fuel distribution; quantity of soap distributed per baby; regularity of soap distribution; number of cups distributed; number of feeding bottles surrendered) • <u>provide health education on BMS preparation and cup feeding</u> (% of carers receiving health education and recalling key messages) |

Gaps in Knowledge: Areas for further study

Target audience (uses): Those responsible for research activities in agencies or associated institutions. Policy makers and donors.

IFEG identified a number of important gaps in current knowledge which it regarded as priorities for further study. It is hoped that operational agencies and research teams will form partnerships to address the following questions:

Field Level

- Does the provision of stress counseling (including trauma and sexual abuse) for lactating women improve breastfeeding outcomes in emergencies? If so, which subgroups of mothers/infants benefit most?
- Does the provision of family and community support for lactating women improve breastfeeding outcomes in emergencies? If so, which subgroups of mothers/infants benefit most?
- Does nutritional supplementation of lactating women improve breastfeeding outcomes in emergencies? If so, which subgroups of mothers/infants benefit most?
- In terms of: feasibility, cost effectiveness, morbidity and mortality, how does provision of breastfeeding support compare with the provision of breastmilk substitutes?
- How does emergency distribution of breastmilk substitutes affect breastfeeding practice in the community during and after the emergency? Can any adverse effects be reduced by improved targeting of breastmilk substitutes in emergencies?
- In terms of infant health and survival, what are the effects of using other breastmilk substitutes (including early introduction of solids) for infants under six months old, when both breastmilk and infant formula are unavailable?
- Under emergency conditions, does the risk of HIV transmission through breastfeeding outweigh the risk of infant death from artificial feeding among babies of mothers who are infected with HIV?
- Conduct further field testing and evaluation of recent guidelines on the treatment of severe malnutrition in infants less than 6 months old in emergency settings.

Agency Headquarters Level

- What is the frequency and volume of donations of breastmilk substitutes and feeding bottles from (i) general public and (ii) manufacturers of infant foods, to agencies for use in emergencies?
 - Why are such donations made?
 - Why are such donations requested and/or accepted and by whom?

Annexes

Annex I: Meeting Participants

Core Participants:

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Occasional Participants:

| | |
|--------------------|-----------------------------------|
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| Mary Corbett | <i>OXFAM</i> |
| Chloe Fisher | <i>Independent BF Counsellor</i> |
| Margreet Houdijk | <i>WEMOS (IBFAN)</i> |
| Coral Jepson | <i>AHRTAG</i> |
| Sandra Lang | <i>Independent</i> |
| Trevor Lines | <i>MSF-UK</i> |
| Susan Lillicrop | <i>OXFAM</i> |
| Adele O'Hanlon | <i>Children's Aid Direct</i> |
| Terese Patten | <i>ODA</i> |
| Trudie Price | <i>VSO</i> |
| Peter Poore | <i>SCF</i> |
| Barbara Reed | <i>Independent Researcher</i> |
| Emma Roberts | <i>Tear Fund</i> |
| Gill Ryan | <i>Baby Milk Action Ireland</i> |
| Andy Seal | <i>ICH</i> |
| Major Dawn Sewell | <i>Salvation Army</i> |
| Liz Smith | <i>VSO</i> |
| Anna Taylor | <i>UNICEF/IGBM</i> |
| Andrew Tomkins | <i>ICH</i> |
| Sarah Uppard | <i>SCF</i> |
| Jill Volpe | <i>British Red Cross</i> |
| David Westwood | <i>World Vision</i> |
| Alan Waites | <i>International World Vision</i> |
| Sue Woolley | <i>Baby Milk Action (IBFAN)</i> |
| Helen Young | <i>OXFAM</i> |

Annex II: The International Code of Marketing of Breast-milk Substitutes

UNICEF/WHO Baby Friendly Hospital Initiative:

In 1979, WHO and UNICEF organised an international meeting on infant and young child nutrition. One of the recommendations made was that there should be an international code of marketing of infant formula and other products used as breastmilk substitutes. Member states of WHO and other groups/individuals who had attended the 1979 meeting, including representatives of the infant food industry, were then involved in a consultative process which culminated in the production of the International Code. This Code was endorsed by the World Health Assembly in 1981 in a Resolution which stressed that the Code is a "minimum requirement" to be enacted "in its entirety" by all countries.

The Code sets out the responsibilities of the infant food industry, health workers, national governments and concerned organisations in relation to the marketing of breastmilk substitutes, feeding bottles and teats as well as information regarding the use of these products. Since 1981, subsequent WHA Resolutions have been passed which aim to strengthen and clarify the Code. These Resolutions have the same status as the Code itself and should be read with it.

The most important parts of the Code, which relate to infant feeding in emergencies, are:

The Aim

"The aim of this Code is to contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution."

The Scope

The Code applies to any product which is marketed or otherwise represented as a partial or total replacement for breastmilk, and to feeding bottles and teats. Only certain products are suitable as breastmilk substitutes, but many other unsuitable products (such as baby cereals, baby drinks and follow-on formulas) fall under the scope of the Code when they are marketed inappropriately.

Advertising

No advertising of above products to the public.

Samples

No free samples to mothers, their families or health care workers.

Health care facilities

No promotion of products i.e. no product displays, posters or distribution of promotional materials. No use of mothercraft nurses or similar company-paid personnel. No free or low-cost supplies.

Health care workers

No gifts or samples to health care workers. Product information must be factual and scientific.

Supplies

No free or low-cost supplies of breastmilk substitutes to maternity wards and hospitals. (The 1994 Resolution states that they should not be in any part of the health care system).

Information

Governments have the responsibility to ensure that "objective and consistent information is provided on infant and young child feeding". Such information should never promote or idealise the use of breastmilk substitutes and should include specified points. It should also explain the benefits and superiority of breastfeeding and the costs and hazards associated with artificial feeding. Manufacturers should provide only scientific and factual information to health workers and should never seek contact with mothers.

Labels

Product labels must clearly state the superiority of breastfeeding, the need for the advice of a health worker and a warning about health hazards. No pictures of infants, or other pictures idealising the use of infant formula.

Products

Unsuitable products, such as sweetened condensed milk, should not be promoted for infants. All products should be of high quality (and should meet Codex Alimentarius standards, see annex VII) and take account of the climatic and storage conditions of the country where they are used. Manufacturers and distributors should comply with the Code INDEPENDENTLY of government action to implement it. NGOs have a responsibility to report any violations to governments and to manufacturers.

The Resolutions most relevant to emergencies are:

The 1981 Resolution (WHA 34.22) stresses that the Code is a "minimum requirement" to be enacted "in its entirety" by all countries, that it should be translated into "national legislation" and that it should be monitored.

The 1986 Resolution (WHA 39.28) states that:

'any food or drink given before complementary feeding is nutritionally required may interfere with the initiation or maintenance of breastfeeding and therefore should neither be promoted nor encouraged for use by infants during this period.'

'The small amounts of breastmilk substitutes needed for a minority of infants should be made available through normal procurement channels and not through free or subsidised supplies.'

'The practice being introduced in some countries of providing infants with specially formulated milks (so-called "follow-up milks") is not necessary.'

The 1992 Resolution (WHA 45.34) reaffirms that 'during the first four to six months of life, no food or liquid other than breastmilk, not even water, is required' and endorses the WHO/UNICEF Baby Friendly Hospital Initiative.

The 1994 Resolution (WHA 47.50) states that:

'mothers should be supported in their choice to breastfeed, obstacles should be removed and interference prevented in health services, the workplace or the community';

'complementary feeding should be introduced only from about 6 months';

'there should be no free or subsidised supplies of breastmilk substitutes or other products covered by the Code in any part of the health care system';

In emergency relief operations, breastfeeding for infants should be protected, promoted and supported. Any donated supplies of breastmilk substitutes (or other products covered by the Code) may be given only under strict conditions: if infant has to be fed with breastmilk substitute; the supply is continued for as long as the infants concerned need it; and the supply is not used as a sales inducement.

The 1995 Resolution (WHA 49.15) states that:

'financial support for professionals working in infant and young child health should not create conflicts of interest.'

'monitoring of the Code and subsequent relevant resolutions should be carried out in a transparent independent manner, free from commercial influence.'

Annex III: Further Reading

The following documents contain further relevant information

HIV and Infant Feeding Documents: (1) Guidelines for decision makers, (2) Guide for healthcare managers and supervisors, (3) A review of HIV transmission through breastfeeding.

Published by: UNICEF, UNAIDS, WHO.

Date: 1998

Available from: WHO marketing and dissemination, CH-1211 Geneva 27, Switzerland. publications@who.ch

The Code Handbook. A Guide to Implementing the International Code of Marketing of Breastmilk Substitutes

Author: Sokol E.

Date: 1997

Available from: International Code Documentation Centre and IBFAN.

Breastfeeding, How to Support Success

Published by: WHO

Author: Vinther T. and Helsing E.
Date: 1997
Available from: Dr. Aileen Robertson,
8 Scherfigsvej, DK-2100 Copenhagen, Denmark.

Guiding Principles for Feeding Infants and Young Children during Emergencies

Published by: WHO
Date: draft
Available from: Mrs Randa Saadeh, WHO, 20 Ave Appia, CH 1211, Geneva 27, Switzerland

How to Breastfeed during an Emergency – A Guide for Mothers

Published by: WHO
Authors: Robertson A, Helsing E, & Vinther TD
Date: March 1997
Available from: Dr Aileen Robertson, Regional Office for Europe, Programme for Nutrition Policy, WHO, 8 Scherfigsvej, DK-2100 Copenhagen, Denmark.

Breastfeeding and Food Security

Publication: Infancy Newsletter
Date: 1996
Available from: INFACT Canada, 6 Trinity Square, Toronto MSG IBI, Canada

Breastfeeding and HIV: Making an Informed Choice

Published by: CBI, La Leche League International
Date: 1996
Available from: Centre for Breastfeeding Information, La Leche League International, Schuamberg, IL 60168 – 4079, USA

Breastfeeding During an Emergency – Teaching Materials

Publication: Project During Breastfeeding Module of the Diploma/MA in Health Promotion, UCG
Author: Crangle E
Date: 1996
Available from: Genevieve Becker, Dept of Health Promotion, UCG, Ireland

Concern Worldwide, Nutrition Emergency Module

Date: 1996
Available from: Annalies Borrell, Concern Worldwide,
1 Upper Camden St, Dublin 2, Ireland

Crucial Aspects of Infant Feeding in Emergency and Relief situations (a 70 Page book containing reprints of many relevant others).

Publication: IBFAN Regional Coordination Office for Europe, c/o Geneva Infant Feeding Association
Date: 1996
Available from: IBFAN Europe, c/o GIFA, B.P. 157, 1211 Geneva 19, Switzerland. Also available from Baby Milk Action: 23 St. Andrews Street Cambridge CB2 3AX E-mail babymilkacti@gn.acp.org

Discussion on Infant Feeding in Emergency and Relief Situations

Published by: Wemos
Date: 1996
Available from: Wemos, P.O. Box 1693, NL – 1000 BR Amsterdam, The Netherlands

Feeding in Emergencies for Infants Under Six Months; Practical Guidelines

Published by: OXFAM
Authors: Carter K / OXFAM Public Health Team
Date: 1996
Available from: OXFAM, 274 Banbury Road, Oxford OX2 7DZ, England

Infant and Young Child Feeding in Emergencies (Final Draft)

Authors: Wellstart International, Expanded Promotion of Breastfeeding Program
Date: 1996
Available from: Jean Baker, Project Director
The LINKAGES Project, Academy for Educational Development (AED), 1255 23rd Street, N.W. Washington,

D.C. 20037, U.S.A.

Not Enough Milk: Helping Mothers Who Complain of 'Not Enough Breastmilk'

Publication: Update No 21

Date: 1996

Available from: The Director, Division of Diarrhoeal and Acute Respiratory Disease Control, WHO, 1211 Geneva 27, Switzerland

Rapid Assessment of Infant Feeding Practices in Two Rwandan Refugee Camps

Published by: Wellstart International

Authors: Lung'aho M.S, Clause B & Butera F

Date: 1996

Available from: Wellstart International, Expanded Promotion of Breastfeeding Program, 3333 K Street, NW, Suite 101, Washington DC 20007, USA

Ten Steps to Successful Breastfeeding: A Summary of the Rationale and Scientific Evidence

Publication: Birth No 23:3

Authors: Saadeh R & Akre' J

Date: 1996

Available from: Mrs Randa Saadeh, WHO, 20 Ave Appia, CH 1211, Geneva 27, Switzerland

The International Code of Marketing of Breast-milk Substitutes; A Common Review and Evaluation Framework (In preparation)

Published by: WHO

Date: 1996

Available from: WHO Publications, Distribution and Sales, 1211 Geneva 27, Switzerland

Nutrition Guidelines

Published by: MSF

Edited by: Airbelot, A.

Date: 1995

Available form: MSF Paris

Birthweight and Breastfeeding of Babies During the War in One Municipal Area of Sarajevo

Publication: European Journal of Clinical Nutrition 49 Suppl 2: S37-39

Author: Moro D

Date: 1995

Breastfeeding in Refugee Situations

Publication: Breastfeeding Briefs No 21

Date: 1995

Available from: GIFA, B.P. 157, 1211 Geneva 19, Switzerland

Infant Feeding in a Refugee Camp

Publication: Midwives

Author: Toothill B

Date: May 1995

Available from: Midwives, 120 High Road, East Finchley, London N2 8AG, England

Nutrition and Care of Young Children During Emergencies

Publication: Food and Nutrition Bulletin Vol 16 No 4

Author: Longhurst R

Date: 1995

Nutrition and Immunization Survey of Bosnian Women and Children during 1993

Publication: International Journal of Epidemiology, Volume 24 No 6

Authors: Robertson A, Fronczak N, Jaganjac N, Hailey P, Copeland P & Duprat M

Date: 1995

Available from: Dr Aileen Robertson, WHO, 8 Scherfigsvej, DK - 2100 Copenhagen, Denmark.

Statement on the Use of Milk Products During Emergencies

Published by: CIDA

Date: 1995

Available from: CIDA, Multilateral Programmes Branch, 200 Promenade du Portage, Hull, Quebec, Canada

Body Mass Index and Lactation Performance

Publication: European Journal of Clinical Nutrition: No 48;3

Authors: Prentice AM, Goldberg GR, & Prentice A

Date: 1994

Breastfeeding During the HIV Epidemic. The Dilemma: Preventing Vertical Transmission or Preventing Death

Publication: Journal of Tropical Paediatrics Volume 40

Author: Cutting W

Date: 1994

Lactation – How important is it?

Publication: Journal Royal Society of Health 114 (1): 19–28

Authors: MacIntyre UE & Walker AR

Date: Feb 1994

Socio–Cultural Considerations for Infant Feeding In Emergencies: A Discussion Paper

Author: Almedon A

Date: 1994

Available from: Dr Astier Almedon, Health Promotion Sciences Unit, Dept of Public Health & Policy, London School of Hygiene & Tropical Medicine, Keppel St, London WC1E 7HT, England.

Breastfeeding counseling: A training course

Publication: WHO (and UNICEF)

Date: 1993

Available from: WHO, Ch–1211, Geneva 27, Switzerland

Infant Feeding in Emergencies

Publication: Disasters. Volume 7 No 2

Author: Kelly M

Date: 1993

Maternal Malnutrition and Breastfeeding; is There Really a Choice for Policy Makers?

Publication: Journal of Tropical Paediatrics. 37 Suppl

Author: Huffman S

Date: Oct 1991

Child Weaning Practices in Times of Crisis

Publication: RPN

Author: Almedon A

Date: 1990

Available from: Dr Astier Almedon, Health Promotion Sciences Unit, Dept of Public Health & Policy, London School of Hygiene & Tropical Medicine, Keppel Street, London, WC1E 7HT, England

Constraints on Weaning: Evidence from Ethiopia and Sudan

Publication: Journal of Biosocial Science; Volume 22

Authors: Almedon A & de Waal A

Date: 1990

Innocenti Declaration; On the Protection, Promotion, and Support of Breastfeeding

Published by: WHO

Date: 1989

Available from: WHO, 20 Ave Appia, CH 1211 Geneva 27, Switzerland

Assisting in Emergencies. A resource handbook for UNICEF field staff

Published by: UNICEF

Author: Ockwell, R.

Date: 1986

Milk for Hungry Children – Some Questions

Publication: IBFAN–Africa Newsletter

Author: Armstrong H

Date: Feb 1985

Available from: IBFAN Africa, P.O. Box 781, Mbabane, Swaziland

The Effect of Water Abstinence on Milk Synthesis in Lactating Women

Publication: Clinical Science; Volume 66

Author: Prentice A

Date: 1984

Maternal and Child Programmes in Refugee Camps: Key Issues

Publication: Advances in International Maternal and Child Health Volume 3

Authors: Jelliffe DJB & Jelliffe EFP

Date: 1983

Available from: Oxford University Press, Great Clarendon Street, Oxford, OX2 6DP, England

International Code of Marketing of Breast–milk Substitutes

Published by: WHO; Resolution WHA34.22

Date: 1981

Available from: WHO Distribution and Sales, CH 1211 Geneva 27, Switzerland

Manual on Feeding Infants and Young Children, Third Edition

Authors: Cameron M & Hofvander Y

Published by: Oxford University Press

Available from: Oxford University Press

Also limited copies from SCN, 20 Ave Appia, CH 1211, Geneva 27, Switzerland

Annex IV: UNICEF/WHO Baby Friendly Hospital Initiative: Ten Steps to Successful Breastfeeding

To become a *Baby Friendly Hospital*, every facility providing maternity services and care for new–born 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 half an 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 new–born infants no food or drink other than breastmilk, unless medically indicated.
7. Practice 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 (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.

Annex V: Training on Infant Feeding in Emergencies

Currently there are no specific courses on infant feeding in emergencies. The Centre for International Child Health in London is investigating the feasibility of offering specialised courses or training modules and would be interested to hear from individuals and organisations who would like to participate.

There are several recognised courses on infant feeding in non-emergency situations as outlined below. These differ principally in the amount of time and skills training in counseling, the technical content and the degree of orientation towards a hospital or community setting.

Any of these courses would provide a useful grounding for health professionals working in emergencies. The WHO-40 hour course is highly recommended for personnel who are directly working with mothers. It would be an ideal course to set up in an ongoing emergency situation in order to train up local counsellors.

1. Breastfeeding management and promotion in a Baby Friendly Hospital

Organised through WHO/UNICEF Baby Friendly Initiative programme.

An 18-hour course aimed at health staff implementing the BFI. Covers clinical aspects and counseling skills, but not in detail. Available in UK as a modular course. Usually conducted in implementing health trusts, but open course periodically available. Contact UK BFI office for details¹.

¹ UNICEF-UK BFI, P.O. Box 29050, London WC2H 9TA, Tel: +44 171 8365901, Fax: +44 171 3795797, e-mail: bfi@unicef.org.uk

2. Breastfeeding counseling: a training course

Organised through WHO, usually in liaison with local health authorities.

A 40 hour (2 week) in-depth counseling course designed to train trainers (attend for 2 weeks) as well as train counsellors (attend for second week only). Covers clinical aspects. Currently not available in UK.

3. Breastfeeding: Practice and Policy course

Held in collaboration with WHO and UNICEF at the Centre for International Child Health, Institute of Child Health, London. A 4 week advanced level international course for senior health professionals in a position to influence practice and policy. Intensive technical and skills based course which covers clinical skills and counseling. Takes place annually in July.

4. IBFAN/UNICEF: Training guide in lactation management

(Also known as the Master Trainers Course). An 80-hour course designed to train trainers who can become trainers of Baby Friendly Hospital assessors. Currently not available in the UK.

Annex VI: Stop-gap recipes only to be used as a last resort in extreme situations

| Types of Milk | Cow's milk boiled | Evaporated milk | Full-cream milk powder | Dried skimmed milk |
|---------------------------------|-------------------|-----------------|------------------------|--------------------|
| Ingredients | | | | |
| Milk | 125ml | 50ml | 15g | 10g |
| Boiled water to make | 200ml | 200ml | 200ml | 200ml |
| Sugar | 15g | 15g | 15g | 15g |
| Oil | nil | nil | nil | 5g |
| Approximate value/100 ml | | | | |

| | | | | |
|-----------------------|-----|-----|-----|-----------------------|
| Energy (kcal) | 70 | 70 | 70 | 70 |
| Protein (g) | 2.0 | 2.2 | 2.0 | 1.8 |
| Vitamin A (ug) | 29 | 27 | 28 | Check label on packet |

ALTERNATIVELY: The F100 diet is a therapeutic milk designed to support rapid growth in severely malnourished children and is absorbed by the damaged intestine of older children; as such in an emergency where nothing else is available, could be used (diluted into 2.8, instead of 2 litres) for infants for a short time, although it has not been tested in this role. It is very low in iron so that any infant given this diet is likely to develop iron deficiency. Also for the proper use of this commodity it is important that it is not perceived as a breast milk substitute.

Annex VII: Breastmilk Substitutes – Specification Standards

The Codex Standard for Infant Formula was adopted by the Codex Alimentarius Commission

For Specifications see:

Codex Alimentarius Volume Four
Foods for special dietary uses
(including foods for infants and children)
FAO, Rome 1994

The EU Commission has also issued directives on Infant formula Specifications

For Specifications see:

Commission Directive 96/4/EC
Official Journal of the European Communities
No L 49/12, Feb. 1996

Annex VIII: Re-lactation, Hand Expression and Cup Feeding

A BRIEF GUIDE FOR AID WORKERS.

Introduction

In emergency situations infants are an especially vulnerable group. Breastfeeding is the safest and simplest way of ensuring that they reliably get the nutrients they need for adequate growth and for the development of their brains and central nervous systems. Breastmilk also provides priceless protection against illnesses that are rampant in natural and man-made disasters. Even under these very stressful circumstances, most mothers need only a little information and support to breastfeed their infants. Some mothers will need a little more help to establish or maintain a good milk supply. This annex outlines ways in which aid workers can be helpful to these mothers.

1. Establishing a Breastmilk Supply: Re-lactation (and induced lactation)

For many reasons a woman who is not lactating or only barely lactating may find herself in a situation with an infant who needs to be breastfed. A woman who has been pregnant at any time in the past can usually re-lactate. Even post-menopausal women have relactated successfully. Many women who relactate produce enough milk to breastfeed an infant exclusively. A woman who has never been pregnant can establish lactation (this is called induced lactation); although this is more difficult and the amount of milk produced may be less than is needed for exclusive breastfeeding. Establishing a milk supply depends primarily on the infant's suckling. Younger infants tend to be more willing to suckle than older infants, but there are reports of children over a year old who have been breastfed after relactation.

1a) How to establish a breastmilk supply.

What can YOU do to help?

- A woman who wants to relactate must be well motivated and have good support if she is going to manage it. **Give her confidence** that she can produce milk. Reassure her that you will help her.
- Let the mother know that it may take several days – perhaps even two weeks or more – for the milk to start coming in and possibly several more weeks (2–6 weeks) before she is able to breastfeed exclusively. A woman inducing lactation for an orphaned infant will probably need even longer.
- Explain to the mother, her family and her health care workers that it might help her, while she is building up her milk supply, if she can get someone to help her with her daily tasks. Look into getting her priority in food and water queues with other lactating mothers.
- Make sure that the mother has extra rations, the same as other lactating women.
- Assist the mother with breastfeeding advice, hand expression (see section 2a) and with any other needs she may have.

What should the MOTHER do?

- Skin-to-skin contact stimulates the release of the hormone prolactin, which is necessary for milk production. Encourage mothers to keep their infants close to them and have as much skin-to-skin contact as possible.
- Correct attachment and positioning of the infant to the mother's breast is important for stimulating a good milk supply, and protecting against any potential problems such as sore nipples. Make sure the mother understands how to position and attach her infant to her breast to ensure effective suckling and removal of her breastmilk. (Note: See box for a brief guide on positioning and attachment).
- The more often the breast is stimulated, the more milk will be produced. The mother should put their infant to each breast at least 10–14 times in a 24-hour period (every 1–2 hours in the day and whenever possible at night) for as long as the infant is willing to suckle. If a mother is not producing much (or any) milk, an infant may be reluctant to suckle long enough to provide good stimulation. The mother can encourage her infant to stay at the breast longer by dripping milk into the corner of his/her mouth or by using a breastfeeding supplementer (see section 1b). Remember that depending on how long it is since the mother stopped lactating, it can take a couple of weeks for the milk to arrive and even longer before a mother is able to breastfeed exclusively.
- The levels of prolactin – the milk producing hormone – are highest at night. Therefore, if possible, the infant should sleep with his/her mother and breastfeed whenever they wake at night. Frequently an infant is more willing to suckle when he/she is sleepy (or sleeping) than when he/she is wide-awake. Note: never force the infant onto the breast.
- The mother must learn to “baby-watch” so she can pick up her infant's signals of interest, for example, licking his/her lips, opening and closing his/her hands and mouth, moving his/her head around and so on (this is often called “mouthing” or “rooting”). If the mother can squeeze a small amount of her milk onto her infant's lips or tongue it may awaken his/her interest.
- The infant should not be given a dummy or pacifier. They may reduce the infant's interest in suckling at the breast and can be difficult to keep clean, especially in emergency situations.
- If the infant is not willing to suckle as frequently as needed, the mother can stimulate her milk production by hand-expression between feeds (see section 2a) or whenever possible, preferably every 1–2 hours. Keep in mind, however, that the infant's suckling is the best way to stimulate milk production. In order to stimulate her milk production the mother should also touch her nipples frequently until they become erect.

A brief guide on positioning and attachment during breastfeeding

- Breastfeeding should NOT hurt; if it does hurt it is wrong, take the infant off the breast and start again.
- Correct positioning. The infant's head and body should be in line and turned towards the mother. The infant's nose or upper lip needs to be opposite the nipple.
- When the infant attaches to the breast the mother should wait until the infant has a wide mouth – about 90 degrees. If he/she doesn't open spontaneously, the mother can stroke her infant's lower lip with her breast or finger until he/she does.
- As soon as the infant has his/her mouth open she should quickly take the infant to the breast, with the infant's chin leading and aiming his/her lower lip below the nipple well back on the areola (the dark area surrounding the nipple) and the nipple towards the infant's nose.
- There should be more areola visible above the infant's mouth than under the chin. [The infant should be breastfeeding not nipple feeding, the nipple is only part of what should be taken into the infant's mouth; the rest is breast tissue taken in by the tongue from below the nipple. Nipple sucking is very painful and is not effective in stimulating milk production.]
- If attached correctly the infant's chin should be touching the breast and the infant should have a wide mouth. The infant's lower lip should also be flanged out – however this may be hard to see so don't check for this if it means that you will unintentionally break the infant's attachment.
- If the infant is well attached he/she will be swallowing and will have slow deep sucks followed by pauses. [The infant will suck quickly at first before getting into a slow deep sucking rhythm. The infant will pause occasionally (he/she is waiting for more milk to come down) this does NOT mean that the infant has finished.]

Note: The infant should be left to come off the breast when he/she wants. A mother will know when her infant has finished the first breast when he/she comes off the breast or falls asleep. She can then burp him/her and offer the second breast, which he/she may or may not take.



Diagram 1: using a breastfeeding supplementer

1b) How should an infant be fed before enough breastmilk is produced?

- While lactation is being established the infant will need to be artificially fed. Give the full amount of artificial milk required (150mls per kg per day) until the milk starts coming.
- Feed the breastmilk substitute (BMS) by cup (see section 3) or with a breastfeeding supplementer (see below).

- As soon as her breastmilk appears the mother can start to reduce the amount of BMS she is giving her infant. Start by reducing the BMS given by 30–50mls a day – either in one feed or spread out over each of them. If the infant continues to gain weight and has 6–8 very wet nappies a day the BMS can be reduced by another 30–50mls every two to three days. However, reducing the BMS too quickly can compromise the infant's growth and cause the mother unnecessary additional anxiety.
- In order to determine that the infant is getting enough milk it is important to check the infant's weight gain (over 125g a week), urine output (it should be abundant, pale yellow or clear in colour) and fontanel (it should not be sunken). If the infant appears not to be getting enough milk then give the same quantity of BMS for a few days and if necessary increase the amount of BMS for a day or so. Moreover, it may sometimes be necessary – during a growth spurt, for instance – to increase the BMS a little and then go back to reducing it slowly again.
- Supplementing while breastfeeding. A helpful method of re-establishing or inducing lactation is to feed the BMS to the infant while he/she is suckling. In this way the infant's efforts are rewarded, and the infant's suckling stimulates the production of milk. This method is useful if an infant is not interested or is too weak to suckle from a breast that does not produce milk yet. The supplement used can be artificial milk, pasteurised donated breastmilk or preferably the mother's own expressed milk (if she is producing any). The supplement can be put into the side of the infant's mouth using a syringe or dropper while the infant is suckling, it can be dripped onto the mother's breast so that it goes into the infant's mouth while the infant suckles, or, if **cleanliness and sterilisation can be assured**, then a "breastfeeding supplementer" can be used. This consists of a cup or bottle of supplement, with a fine tube which leads from the bottom of the container, along the length of the mother's nipple (at the top or side) and into the infant's mouth (see diagram 1).

What **you** can do to help a mother use a breastfeeding supplementer.

- Show the mother how to use the supplementer and how to keep it absolutely clean. The tube needs to be sterilised after every feed and changed every few days.
- Show the mother how to regulate the flow of milk from the supplementer so that the infant does not feed too fast and so that the breast is stimulated; the infant should suckle for about 30 minutes at each feed if possible. If the flow is too fast it can be regulated by closing the tube a bit with a paper clip, a knot, or by lifting or lowering the container.
- Explain to the mother and her family or friends that she may need some help during this procedure, for example, by holding the cup.
- Remind the mother to let her infant suckle at any time he/she is willing – not only when she is using the supplementer.



Diagram 2a, How to express breastmilk

2. Expression of breastmilk

All mothers should learn how to express their milk. This is useful if the mother is separated from her infant; if the infant is too weak to suckle; if the breasts are severely engorged; or to stimulate milk production, for example, when relactating. Expression can be done by hand or with a pump (hand or electrical); however, in emergencies it is very unlikely that pumps or electricity will be available so this section will concentrate on hand expression.

What should the MOTHER do to express her breastmilk?

2a) Hand expression

What YOU can do to help:

- Ensure that the mother has some privacy.
- Help her to relax.
- Provide practical support by providing her with the equipment she needs e.g. a container.

(see diagram 2)



Diagram 2b

She should:

1. Wash her hands thoroughly.
2. Prepare a very clean cup or container with a wide neck to collect the milk in.
3. Relax, get comfortable and think of her infant, if her infant is not there it may be useful if she has something of her infant with her, e.g. a photograph or a piece of her infant's clothing to smell.
4. Stimulate her breast to release milk (this is called the let-down reflex) by gently massaging and stroking her breasts from the outside in towards the nipple and touching her nipples until they are erect.
5. Lean slightly forward so that the milk can be collected in the container.
(Note: the following is just one method, she may find a way that suits her better.)
6. Hold her breast by placing her four fingers underneath and her thumb on top. Her index finger and thumb should be about 4cm (an inch and a half) away from the base of the nipple; this may or may not correspond to the outer edge of her areola depending on its size. Her fingers should be over her lactiferous sinuses, which are the areas in the breast where the milk collects; some women can feel these as small round thickenings under their fingers.
7. Press her fingers in slightly towards the chest wall.
8. Compress the breast tissue (lactiferous sinuses) between her fingers, and then release. Press and release, simulating as much as possible the rhythm of her infant's suckling. This should not hurt; if it does hurt she is doing it wrong and needs to improve her technique. She should not hurt herself by squeezing, rubbing, pushing or pulling too vigorously. Some mothers find that using a rolling motion with their thumb and fingers compresses and empties the milk reservoirs without hurting the sensitive breast tissue.
9. Be patient, even if no milk comes at the beginning.
10. Move her hands around her breast so that she expresses from all areas of her breast
11. Express one breast for at least 3–5 minutes until the flow slows; then express the other side, then repeat both sides. She can use either hand for either breast or both hands.



Diagram 2c

Note: Expressing breastmilk adequately can take 20–30 minutes or even longer; especially in the first few days when only a little milk is produced. The mother should be encouraged to express for at least this long several times a day.

2b) Storage and use of stored breastmilk

Expressed breastmilk must be stored in a sterilised, closed container in the coolest place available. Current guidelines are that it can be stored for up to 6–8 hours at room temperature (26°C/78°F or lower) – although it is best to refrigerate the milk as soon as possible if it is not being used – and for 24–48 hours in a refrigerator (4°C). After 48 hours all milk should be frozen at –18°C. It can be stored in the freezer for 3 months, as long as the temperature is maintained. If there is a power failure then the milk being stored in the fridge or freezer should be consumed within 8 hours, after this time it should be thrown away.

Note: (i) It is easier to use if milk is frozen in small, portion–size amounts. Never re–freeze it, but keep it in the refrigerator for use within 48 hours. (ii) Let the breastmilk thaw in the room, it should be used when it is at room temperature. It should not be heated, if necessary it can be thawed by placing the container in some warm water.

3. Feeding by cup

Most babies do not need to feed from anything other than the breast until they are about 6 months old. However, if the infant does need supplementation then this should be given by the supplementation techniques described in section 1b or by cup; bottles and teats should **not** be used as they may cause sucking confusion. Moreover, in emergency situations it is difficult – or impossible – to ensure the cleanliness and sterility of this equipment.



Diagram 3: Feeding an Infant by cup

How do you cup feed an infant? (see diagram 3)

- Place the wide–awake infant in an upright position sitting on your lap.
- Support the infant’s shoulders and neck with your hand, so that you have some control over the infant’s head. It may also be helpful to tuck the infant’s arms away by wrapping him/her up; this can also help to support him/her.
- Half fill a small cup. It is best if it is transparent so you can see the milk and with a thin rim (the rim must not be sharp).
- Place the cup at the infant’s mouth, resting the cup gently on the infant’s lower lip and so that the edges of the cup are at the corners of the infant’s mouth (where the top and bottom lips meet)
- Tip the cup so that the milk reaches its rim and the infant’s lower lip. Aim to keep the cup in this position.

- A pre-term or sick infant may lap the milk at first with the tongue, while a full-term infant will sip the milk. DO NOT pour the milk into the infant's mouth.
- Be patient. Take the lead from the infant; let him/her decide when he/she has had enough.
- In order not to waste milk some people like to use a saucer to catch the spilt milk. With practice the mother can do this or somebody else can hold it (see page 24).
- Measure the infant's intake over 24 hours; the amount the infant has at each feed will vary.

All the diagrams in this annex have been taken from Breastfeeding counseling: a training course (see [annex III](#)).

The contents of this document are primarily the work and material of the participants of the Infant Feeding in Emergencies Group. The Emergency Nutrition Network compiled this report with extensive assistance from Lola Gostelow (SCF), Tessa Martyn and Patti Rundall (Baby Milk Action), Marion Kelly (DFID) and Ali Maclaine. To order copies please contact:

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