

Protecting Babies and Supporting Mothers: Infant and Young Child Feeding in Emergencies

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Introduction

When an emergency occurs, thoughts often turn to the children, and particularly the babies, who are affected. It is widely known that infants are vulnerable in emergencies and require prompt assistance. It is understood that while an adult can survive on just water for many days, babies have an urgent requirement for their specific food needs to be met. Unfortunately, the provision of appropriate aid to infants has proven challenging to governments and aid organisations. Aid targeted at infants has frequently done more harm than good. Ensuring that aid provided to babies is helpful and not harmful is vital to ensuring their survival. In emergencies it is vital that infants and young children be breastfed where ever it is possible and that intensive support for formula feeding be provided for infants that cannot be breastfed.

Why is it important to support breastfeeding and avoid formula feeding ?

In order to maximise health, the World Health Organization (WHO) and UNICEF recommend that infants be fed only breastmilk for the first six months of life and then continue to be breastfed, with the addition of complementary foods, for two years or more (WHO and UNICEF 2003). Breastmilk contains numerous ingredients that help to prevent and fight infection (Gribble 2011). In contrast feeding a young baby infant formula helps to facilitate and maintain infection

(Gribble 2011). Even in the best circumstances, replacement of breastmilk with infant formula elevates the risk of infection in infants. In non-emergency resource-rich contexts, babies that are fully formula fed are up to five times more likely to require hospitalisation for respiratory and gastrointestinal infections than their fully breastfed peers (Talayero, Lizan-Garcia et al. 2006). Nonetheless very few infants die as a result. Maintaining this level of relative safety requires substantial resources: a source of clean water, the ability to heat water, sufficient infant formula, caregivers who are able understand how to properly prepare formula feeds, and access to medical care. All of these resources may be scarce in emergencies.

In non-emergency but resource poor contexts, such resources are also often scarce and feeding an infant under six months anything other than breastmilk and/or early termination of any breastfeeding leads to high rates of deaths due to infection and malnutrition. It has been estimated that sub-optimum infant feeding (which includes formula feeding and other practices such as early or late introduction of solid foods) is responsible for an annual 1.4 million deaths worldwide (Black, Allen et al. 2008).

Sickness and death rates of formula fed in infants in emergencies

Emergency conditions increase mortality rates across populations and infants have heightened vulnerability. For example, one half of deaths of Kurdish refugees on the Turkey-Iraq border in 1991 were infants (Yip and Sharp 1993). Diarrhoeal disease, respiratory tract infections and malnutrition are the most common causes of morbidity and mortality in infants in emergencies (Khan and Munshi 1983, Yip and Sharp 1993, Caritas 2004, WHO 2006) and formula feeding can facilitate these conditions (Lauer, Betrán et al. 2006, Gribble 2011).

High rates of formula feeding in a population prior to an emergency increase the risk to infants. This was evident during a flood in Botswana in 2005-06. In a population of two million people there were over 20 000 cases of diarrhoea in children under five years of whom more than 500 died. As a result of a high HIV prevalence, programs that distributed infant formula to HIV positive women, and

resultant normalisation of formula feeding, approximately 35% of infants under six months were formula fed. Investigators found that babies who were formula fed were thirty times more likely to present for hospital treatment with diarrhoea than babies who were breastfed (Mach, Lu et al. 2009). Mortality rates in formula fed children were also very high. Of 153 children in a hospital group, 32 of the 33 who died were completely formula fed, the remaining child was fed breastmilk, infant formula and unmodified cows milk (Creek, Kim et al. 2010). The disproportionate impact of the flood upon formula fed infants was experienced throughout the country and for example, while in one village no breastfed infants died, 30% of formula fed infants perished (Creek, Kim et al. 2006). Neither maternal nor infant HIV status were associated with infant mortality (Creek 2006).

Impact of emergencies on infant feeding practices

Given that emergencies have a disproportionate impact upon formula fed infants it might be supposed that an emergency will decrease formula feeding rates. However, this is not the case. Emergencies often involve social disruption, population displacement, collapse of public health infrastructure, food and fuel shortages and lack of clean water and sanitation (Al Gasseer, Dresden et al. 2004). Completing basic survival activities can be difficult and particularly so for mothers who are caring for children. Adding to this difficulty, mothers may have lost family members who would normally assist them and may have an increased number of dependants (Al Gasseer, Dresden et al. 2004). These factors make it more difficult to care for an infant, including in feeding. Breastfeeding women may mistakenly believe that stress will decrease the quality or quantity of their milk. Infant formula may be distributed in aid, encouraging formula feeding (Borrel, Taylor et al. 2001). Infants and young children may be separated from their mothers due to death, displacement or abandonment and feeding these children is a challenge (O'Connor, Burkle et al. 2001).

The 1988 Armenian earthquake illustrates how an emergency can impact infant feeding practices in the short and long-term. Prior to the earthquake breastfeeding rates in Armenia were relatively high with 64% of infants being

fully breastfed at four months of age. However, the Armenian government and non-governmental agencies assumed that the stress of the earthquake and food shortages would mean that women would be unable to breastfeed. Thus, they facilitated the distribution of free infant formula in the immediate and extended aftermath of the earthquake. Breastfeeding rates plummeted until only 23% of babies were fully breastfed at four months of age. Eventually the Armenian government instituted policies that stopped distributions of free formula and instigated breastfeeding support programs but it was not until 2001 that breastfeeding rates reached pre earthquake levels (Harutyunyan 2008).

Policy guidance to support appropriate infant and young child feeding in emergencies (IYCF-E)

The need to ensure that aid is appropriately delivered to infants and young children in emergency situations has resulted in the development of internationally recognised policy and guidance documents. The three main instruments are: 1) the International Code of Marketing of Breastmilk Substitutes (the Code), 2) the Operational Guidance on IYCF-E (the Operational Guidance) and 3) the Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere Standards). The Infant and Young Child Feeding in Emergencies Core Group (IFE Core Group) works to promote the delivery of appropriate aid to infants.

The International Code of Marketing of Breastmilk Substitutes

In 1981 the Code was adopted by the World Health Assembly (WHA) (WHO 1981) and has since been strengthened by 15 subsequent WHA resolutions. The Code arose out of recognition that the unethical marketing of infant formula and other infant feeding products was leading to the displacement of breastfeeding and to the death of many infants. The Code prohibits advertising or promotion of breastmilk substitutes (including infant formula) as well as bottles and teats to the public, provision of any breastmilk substitutes samples to mothers, and donation or subsidised supplies of breastmilk substitutes to the health care system. It also requires that breastmilk substitutes sold or otherwise distributed to a population be labelled in the local language with appropriate instructions for

use and warnings. These requirements apply in emergency as well as non-emergency conditions. In emergencies, the Code requires that breastmilk substitutes should only be distributed under conditions where infants cannot be breastfed. In such situations the supply should continue for as long as infants require it and care should be taken to ensure that the supply is not used as a sales inducement.

Operational Guidance on IYCF-E

The Operational Guidance aims to provide practical advice on how to ensure appropriate IYCF-E (IFE Core Group 2007). It is aimed at emergency relief staff and program managers including those in national governments, United Nations agencies, non-governmental organisations and donors. It contains six sections one of which deals solely with managing artificial feeding. The Operational Guidance stresses the importance of taking action to prevent and manage donations of breastmilk substitutes. It states that distribution of infant formula should only be made to infants that cannot be breastfed. It stresses that aid provided to infants that must be formula fed should include all the resources necessary to formula feed including fuel, cooking equipment, water, education and medical and nutritional monitoring and these resources should be provided as long as the infant requires it. Infant formula should be purchased at market rates (not donated), meet *Codex Alimentarius* standards, have a shelf life of at least six months, be labelled in the local language and preferably be unbranded. The use of feeding bottles should be discouraged and open cups used for feeding infant formula. No milk product should be distributed as part of general rations because they could be used to feed babies. However, dried milk products may be distributed pre-mixed with milled staple foods. The Operational Guidance was endorsed by the WHA in 2010 in resolution WHA 63.23.

Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response

The Sphere Standards are an internationally recognised set of principles and minimum standards for humanitarian response (The Sphere Project 2011). The Sphere Standards direct organisations and governments to uphold the Code and

follow the Operational Guidance. They state that donations of infant formula and feeding bottles should not be asked for or accepted and that any donations that arrive should be placed under the control of a designated agency. Code violations should be monitored and reported. Artificial feeding programs should be managed in accordance with the Operational Guidance and the Code. Milk products should not be distributed as a stand-alone product in general rations. Finally, the Sphere Standards stress the importance of including indicators for IYCF in early emergency assessments to enable the prompt and knowledgeable provision of aid.

Infant and Young Child Feeding in Emergencies Core Group

The IFE Core Group is the international interagency collaboration that developed the Operational Guidance and exists to strengthen the protection, promotion and support of safe and appropriate IYCF-E. Current members of the IFE Core Group are: the Emergency Nutrition Network, United Nations High Commissioner for Refugees (UNHCR), UNICEF, WHO, World Food Program, International Baby Food Action Network, Save the Children, Fondation Terre des Hommes, International Medical Corps, International Orthodox Christian Charities, Goal, Concern Worldwide, International Rescue Committee, and Action Contre la Faim.

The IFE Core Group's work centres on the development and dissemination of policy guidance and capacity building tools, capturing and learning from emergency responses and promoting positive policy and practice change in the context of preparedness and response in IYCF-E.

Donations of infant formula and other milk products are often the biggest threat to infants in emergencies

Donations of infant formula in emergencies are an avoidable problem that undermines the wellbeing of all infants. Such donations are often in excess of what is required, of the wrong type, in the wrong location, labelled in the wrong language, distributed indiscriminately to the caregivers of breastfed as well as

formula fed infants and distributed without other necessary resources resulting in increases in infant morbidity and mortality.

Excessive and inappropriate donations

Unsolicited donations are a common problem in emergencies. Donations of infant formula, other milk products and other breastmilk substitutes were identified as problematic in the emergency responses to the second Chechen war of 2000 (WHO, UNICEF et al. 2000), the 2004 Indian Ocean Tsunami in Thailand, Sri Lanka and India (Carballo and Heal 2005, Jayathilaka 2005, Adhisivam, Srinivasan et al. 2006), the 2005 Kashmir earthquake (Arts 2006), the 2008 conflict in Georgia (UNICEF 2008), the 2009 internally displaced person crisis in Pakistan (IRIN 2009) and the 2010 Haitian earthquake (Nybo 2010) to name but a few.

Donations of infant formula are often made with the intent of assisting infants. However, in some cases manufacturers have donated large quantities of products seemingly to enter or widen markets or as a public relations activity (Gribble 2013). Legislative frameworks can be effective in preventing donations by manufacturers but where regulations disallow donations, manufacturers may lobby for removal of this barrier as is currently occurring in the Philippines (IRIN 2013).

An emergency where the volume of donations was quantified was the Balkan's crisis of the 1990s. During the first few weeks of this emergency, NATO in Macedonia transported 3500 MT of donated aid, of which 40% was baby food (Borrel, Taylor et al. 2001). Aid in the form of infant formula and other milks continued to arrive in large volumes, far in excess of that required, throughout the crisis. Much of this milk could not be used. Speciality formulas for infants with medical conditions were included, as were products that were past their use by date. The cost of disposing of just one stock of expired milk was estimated at \$US500 000 (Borrel, Taylor et al. 2001). The logistical challenges posed by these donations detracted from the humanitarian effort.

Untargeted distribution of milk donations

Preventing their inappropriate distribution of donations is difficult. In the aftermath of the 2006 Yogyakarta earthquake in Indonesia, donated infant formula was “efficiently” distributed to 80% of households with infants regardless of whether the infants were breastfed (Hipgrave, Assefa et al. 2012). Formula feeding rates in households that had received donations were almost double that of households that had not received donations and rates of diarrhoea in households that had received donations were more than double those of infants in households that had not (Hipgrave, Assefa et al. 2012).

Indiscriminate distributions of infant formula harm breastfed infants by decreasing rates of exclusive breastfeeding and they do not assist formula fed infants because invariably they do not include the other resources necessary to formula feed.

Preventing and controlling donations of infant formula, other milks and feeding bottles in emergencies

Prevention of donations of infant formula has proved to be difficult. It is relatively common for “joint statements” from aid and government bodies to warn against donations of infant formula. However, because of the multi-organisation nature of these statements their release can be delayed reducing their effectiveness. Unfortunately, the media response to emergencies is often to immediately call for the donation and distribution of infant formula (Gribble 2013). Early engagement with the media so that media reports protect, rather than undermine the well-being of infants in emergencies is a priority (Gribble 2013).

In some cases it has been possible to prevent donations of infant formula. After Cyclone Nargis in Myanmar in 2008 the delivery of material aid was highly regulated due to government policy. Whilst this hampered aid delivery in many ways, it enabled the Logistics Cluster to effectively thwart the delivery of tonnes of unsolicited donations of infant formula by refusing to transport it. As stated in

the Logistics Cluster press release, *“The Logistics Cluster will not accept milk powder or infant formula into its warehouses or deliver it as cargo with its assets (trucks, boats, planes and helicopters) if it is not part of Nutrition Cluster approved supplementary feeding programs.”* (UN Joint Logistics Centre 2008).

Where aid agencies or governments become aware of the pending arrival of donations, advocacy can prevent donations being delivered. However, advanced warning of the arrival of a donation is often not provided.

Once donations of infant formula arrive determining what should be done with these products is challenging. Collecting donations together and preventing their inappropriate distribution is difficult but necessary. The Operational Guidance and the Sphere Standards state that an organisation should be designated to collect together donated infant formula.

What to do with donations of infant formula once collected remains a problem for which an easy solution has not yet been devised. Destroying un-needed infant formula has proved almost impossible but finding a feasible use for donations is also problematic. For example, during the Balkan crisis of the 1990s, UNICEF collected 27 metric tonnes of un-needed infant formula and devised a program whereby the formula would be fed to the residents of aged care facilities. Unfortunately, this proved too difficult and the program was not sustained in the long term (Marie McGrath, personal communication). Prevention of donations is the preferred option.

Infant feeding bottles are also commonly donated and distributed in emergency aid. Feeding bottles are difficult to clean adequately and milk remnants foster the growth of pathogenic bacteria. In resource poor contexts, infants who need to be fed infant formula should be fed using a open cup that can be easily cleaned (WHO and FAO 2007). After Cyclone Nargis in Myanmar in 2008, Save the Children UK implemented an IYCF-E program that included a bottle amnesty. In this program caregivers who were bottle feeding swapped their feeding bottles for a cup thereby reducing the risks of formula feeding. Distribution of feeding

bottles is also problematic because it encourages formula feeding or the feeding of other milks to infants. There is no place for donation or distribution of feeding bottles in an emergency.

Why breastfeeding mothers request and use donated infant formula

Breastfeeding mothers who are given donations of infant formula in an emergency will commonly feed this formula to their infants. In addition, breastfeeding mothers will often request supplies of infant formula from aid organisations. The desire of breastfeeding women to obtain infant formula in an emergency arises from a variety of circumstances.

Women believe they are unable to breastfeed

Women may believe that they are unable to breastfeed. The belief that stress or lack of food prevents milk production is common and is often based on mothers' interpretation of their infants' behaviour. While neither stress nor moderate malnutrition affects breast milk production or quality (Prentice, Roberts et al. 1983, Hill, Aldag et al. 2005), stress can delay the milk ejection reflex, resulting in infants becoming fussy at the breast. Mothers can interpret such fussiness as indicating that they do not have enough or good enough milk for their infants. Support can enable mothers to maintain exclusive and continued breastfeeding (UNICEF 2008). If a woman is severely malnourished, feeding the mother will enable her to feed her baby.

Cultural beliefs

Cultural beliefs may result in requests for infant formula. For example, in Haiti after the 2010 earthquake some believed that the experience of trauma would make their breast milk bad (Dörnemann and Kelly 2013). Therefore mothers who were traumatised requested infant formula because they did not wish to harm their infant by breastfeeding. Similarly, in many cultures colostrum is considered unhealthy for newborns and women may seek infant formula to feed their babies until their milk "comes in." Education and breastfeeding support can enable women to adapt their view of these situations, to exclusively breastfeed

their young infants and continue to breastfeeding after the introduction of complementary foods (UNICEF 2008, Dörnemann and Kelly 2013).

Aspiration to bottle feed

Aspiration to bottle feed may lead to women requesting infant formula. In the developing world, formula feeding is associated with high socio-economic status. Advertising suggesting that formula feeding improves brain function and educational success has impacted community beliefs about the desirability of formula feeding. When women become aware that aid organisations are distributing infant formula they may see this as an opportunity to provide their baby with something that they have always wanted to give them but have not been able to afford.

Infant formula is a high value product

Mothers and other members of the community may seek infant formula, not to feed their own infant, but to sell. Infant formula is a high value product everywhere, but especially in the developing world. For example the cost of fully formula feeding an infant in the Philippines is estimated at more than three quarters of household income for those who are in the bottom 30% of household income earners (UNICEF 2005, Republic of the Philippines 2011). In the aftermath of an emergency obtaining something of high value provides some security. Individuals may also seemly be seeking to profit from the emergency in obtaining infant formula and fraudulent requests for formula are encouraged by the presence of excessive donations (e.g. Whitehead 2005).

Formula feeding is normal in the population

In some countries or locations formula feeding is the normal and expected way to feed a baby (Lutter and Morrow 2013, Nemeh Ahmad, Abidhakeem et al. 2014). When an emergency occurs, women may still desire to bottle feed. They may also be more comfortable with formula feeding than breastfeeding and wish to formula feed simply because it is familiar and therefore comfortably normal. Being from a culture where bottle feeding is normal means that breastfeeding in

public may be stigmatised. This presents a barrier to breastfeeding that is particularly evident in emergencies where privacy may be scarce.

Supporting breastfeeding women in emergencies

Regardless of the pre-emergency context for infant feeding, women need support to breastfeed in emergencies. They require support to initiate breastfeeding early, to continue exclusive breastfeeding, to resume exclusive breastfeeding, and to continue breastfeeding through the complementary feeding period in emergencies. Women who are concerned that stress or lack of food may affect their ability to make milk require reassurance that this is not the case. They may also receive donations of infant formula or other milks and not understand the risk that use of these products pose to their infants. They will also encounter breastfeeding challenges that are unrelated to the emergency.

Providing support for breastfeeding women and their infants via breastfeeding counselling is an intervention that has been implemented in many emergencies. Access to breastfeeding counsellors has been facilitated in two ways: sending counsellors to mothers or having central places where mothers can come to counsellors. The first method was applied after the Yogyakarta earthquake in Indonesia (2006) and Cyclone Nargis in Myanmar (2008). Because movement from place to place was difficult, counsellors were sent out to visit mothers and provide breastfeeding support. Research from Yogyakarta demonstrated that the breastfeeding counselling provided was very successful in enabling women to exclusively breastfeed and avoid the use of donated infant formula (Sukotjo 2006).

The second method of providing breastfeeding counselling via central spaces is often called the “baby tent” model. Providing “baby tents” where mothers can access breastfeeding support is amongst the oldest emergency response targeted at infants. This method was first deployed in Albania during the Balkans’ crisis in the 1990s and has been extensively used since (Anonymous 1999) in contexts as diverse as Haiti, New Zealand and currently in Europe (Talley and Boyd 2013, Hargest-Slade and Gribble 2015). “Baby tents” may be actual tents but they are

often in buildings such as schools, clinics or evacuation centres. They are a place where mothers can go to find other mothers, safety, emotional support and assistance with breastfeeding. A “baby tent” is different from a normal hospital or clinic service in that the service focuses on well, rather than sick, infants however, depending upon the set up mothers may be able to access health professionals there or be referred onto other services where they can access health professionals.

Breastfeeding counsellors encourage mothers to start breastfeeding straight after birth, to give their babies only breastmilk for the first six months of life, alert them to the dangers of infant formula and other milks, provide support and encouragement, address mother’s concerns, builds her confidence in her ability to breastfeed and rebuts myths. The counselling skills needed in an emergency are no different from those required in non-emergency situations. Where breastfeeding counsellors are not immediately available, it is possible to quickly train and deploy them as a part of emergency response (Sukotjo 2006). Such counsellors have been found to provide effective support to breastfeeding women and support exclusive breastfeeding regardless of the distribution of infant formula (Sukotjo 2006).

Supporting non-breastfed infants

The Operational Guidance states that aid should be provided to formula fed infants on an individualized basis with a needs assessment carried out by a suitably qualified individual. Since breastfeeding provides infants with the best chance of survival, options for providing breastmilk should be explored before a decision is made to support formula feeding. In addition, supporting formula feeding requires substantial resources and providing support to a large number of infants is difficult. Reducing the number of infants requiring such support enables better support for those infants for whom breastfeeding is truly impossible.

Wet nursing

Wet nursing is often a viable option for providing safe food to infants who are motherless or who were formula fed at the time the emergency occurred. Within communities, women who are breastfeeding their own infants or whose infant has died may be willing to breastfeed an infant who would otherwise require formula feeding. In some circumstances it may be appropriate for wet nurses to be compensated for their work with additional food or other resources. Consideration of the risk of HIV transmission via wet nursing is necessary (UNHCR 2009).

Relactation

Another option for making breastmilk available to an infant is relactation. Relactation is the process by which a woman who is not lactating begins to make milk in response to the suckling of an infant. If the infant is formula fed because his or her mother had ceased breastfeeding, she may be willing to restart breastfeeding. If the infant is motherless, a relative or another woman within the community may be willing to relactate. Wet nursing and relactation can often work together, the wet nurse supplementing the mother or primary caregiver's milk until such time as their milk is sufficient.

Resumption of exclusive breastfeeding

Some infants may have been partially breastfed and partially formula fed at the time of the emergency or be partial formula fed as a result of the inappropriate distribution of infant formula. In such cases, it should be considered whether exclusive breastfeeding can be resumed. Given that breast milk supply increases as more milk is removed, women are able to increase their milk supply by increasing the frequency of feeds. Support from appropriately skilled health professionals or breastfeeding counsellors should be provided to breastfeeding women including those who are wet nursing, relactating or increasing their milk supply.

Supporting formula feeding

In many instances there will be infants for whom breastfeeding is not possible. These infants will require infant formula. As outlined in the Operational

Guidance the caregivers of infants who need to be formula fed should be provided with not only infant formula that meets *Codex Alimentarius* standards but all of the other resources necessary to formula feed. This will likely include water, cooking equipment, a feeding cup, utensils for reconstituting feeds, education on how to use these resources and medical supervision.

A large-scale formula feeding program was implemented after the 2010 Haiti earthquake. Several organisations including Save the Children, Concern, Action Contre la Faim, World Vision and UNICEF worked as members of the United Nations Nutrition Cluster to operate “baby tents” which provided support for both breastfeeding and formula feeding. Caregivers of infants could attend the baby tents where their baby’s health and nutritional status would be assessed. Caregivers of breastfed infants were provided with counselling and education to assist them to maintain or regain exclusive breastfeeding and to continue breastfeeding after the introduction of complementary foods.

Where infants were not breastfed and met inclusion criteria, they could be entered into the formula feeding program. The inclusion criteria were: mother absent long-term or deceased, mother suffering from a serious medical condition, abandoned or rejected children, child formula fed prior to emergency, mother not willing to relactate or HIV positive, relactating mothers until relactation complete and victims of sexual violence who chose not to breastfeed (Norton 2011). Caregivers of infants in the formula feeding program were provided with ready-to-use liquid infant formula, feeding cups, intensive education on how to use the infant formula and on-going health supervision (Moreaux 2011).

Complementary feeding in emergencies

Once infants reach six months of age it is recommended that they be fed other foods in addition to breastmilk or infant formula (WHO and UNICEF 2003). Appropriate complementary feeding can be captured by the acronym FATVAH meaning fed at the right **F**requency, in adequate **A**mounts, of appropriate **T**exture, using a **V**ariety of different foods, and in a way that enables **A**ctive

feeding. Foods should be **H**ygienically prepared (Care, University Co LLC et al. No date). Complementary foods also need to be acceptable to caregivers otherwise they will not feed them to their children. Ensuring that caregivers have access to appropriate complementary foods and the tools necessary to prepare and feed them to their infants and young children is a real challenge to which solutions are often difficult to find (IFE Core Group 2009).

Supporting IYCF-E is a cross cutting issue

Supporting appropriate infant feeding in emergencies is a cross cutting issue requiring the involvement of many parts of the aid response. Shelter and protection should ensure that women with infants have access to privacy and safe shelter and can identify women in need of infant feeding support; food security should give mothers priority access to food and water; psychosocial support should assist mothers in dealing with trauma and in caring for their infants; logistics should prevent the acceptance and distribution of donations of milk products; water and sanitation should ensure that the water made available to carers of infants is suitable for reconstituting breast-milk substitutes; livelihoods should design programmes that enable mothers to keep their infants close to them; and media and communications should provide messages on safe infant feeding practices to those affected by the emergency and the outside world, which will help to prevent inappropriate donations and distributions of breast-milk substitutes.

Emergency preparedness

Given the challenges of providing aid to infants in emergencies, emergency preparedness is vital. In line with this, the World Health Assembly (in resolution WHA 63.23) called on governments to ensure that national and international emergency plans include an IYCF-E response based on the Operational Guidance. Because of the difficulties of supporting formula fed infants in emergencies, preparedness plans should stress the importance of protecting, promoting and supporting breastfeeding prior to as well as during the emergency. Promotion of exclusive and continued breastfeeding should be considered an emergency preparedness activity increasing community resilience. Emergency

preparedness plans enable the better provision of aid once an emergency occurs including increasing the ease of prevention and management of donations as well as the implementation of programs to support the wellbeing of all infants.

Emergencies in resource rich contexts

Whilst large-scale humanitarian emergencies most commonly affect developing countries they also occur in highly developed contexts. In developed country contexts it may be possible to get aid to affected populations relatively quickly. However, without appropriate food, young infants may become very sick and may not survive the few days that aid delivery may take. For example, several days delay in providing food to formula fed infants after Hurricane Katrina in the USA in 2005 resulted in dangerous practices such as feeding infants water and reports of infant deaths due to “dehydration” or lack of food (Gruich 2006, Gribble and Berry 2011). The large number of formula fed infants in developed countries can make aid delivery difficult

Unfortunately, even where both formula feeding and large-scale emergencies are common, governments and organisations rarely provide parents and caregivers with detailed information about emergency preparedness when caring for an infant. Most simply state that parents and caregivers should consider the special needs of infants when preparing an emergency kit. Notable exceptions, are the Queensland Government in Australia and the government of New Zealand which provides detailed information about the resources that are needed to formula feed and how to use those resources in an emergency (Queensland Health 2012).

Preparing formula feeds when electricity and unlimited hot water are unavailable, is difficult and substantial resources are required. Where powdered infant formula is used, approximately three litres of water per feed as well as a method of heating water is needed along with other resources such as a kettle, pot, detergent and paper towels. Use of ready-to-use infant formula and disposable feeding implements (single use feeding bottles and teats or cups) reduces the amount of water required to 500mls per feed and removes the need

of a mechanism for heating water and equipment for cleaning feeding implements (Gribble and Berry 2011).

Refugee crisis in Europe

The IYCF-E challenges posed by the current refugee crisis in Europe contains all of the elements of challenge usually associated with IYCF-E as well as some challenges unique to this emergency. Key elements include:

- The situation is chaotic
- Traumatized mothers and caregivers are travelling with their infants and children
- Mothers are from a culture where formula feeding is normalised and breastfeeding stigmatised and considered unreliable
- A very large proportion of mothers are formula feeding or having difficulty with breastfeeding
- Access to infant formula and the resources to prepare and feed it are difficult to obtain
- Donations and inappropriate distributions of infant formula, other milks and complementary foods are rife
- Resources and support for breastfeeding women are often not available
- Media reports are contributing to poor IYCF-E practice

The new challenge posed by this emergency is the speed with which people are moving and with which the routes taken change. This challenge has resulted in the IFE Core Group release interim guidance specifically to deal with this difficult situation (IFE Core Group 2015). However, the central need for mothers and babies to be supported remains.

Summary points:

- Infants experience heightened vulnerability to illness and death in an emergency and formula fed infants are at greatest risk

- Donation and indiscriminate distribution of infant formula increases rates of morbidity and mortality by decreasing rates of exclusive breastfeeding and increasing rates of formula feeding
- The International Code of Marketing of Breastmilk Substitutes, the Operational Guidance on Infant and Young Child Feeding, and the Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response provide essential guidance on providing effective aid to infants in an emergency
- Preventing and controlling the donation and distribution of infant formula should be a high priority in emergencies
- Breastfeeding women should be supported to exclusively breastfeed their young infants and to continue breastfeeding after the introduction of complementary foods
- Where infants are not breastfed, options for obtaining breastmilk for the infant via wet nursing or relactation should be explored before a decision is made to support formula feeding
- Where a decision is made to support formula feeding, caregivers should be provided with all of the resources necessary to formula feed including infant formula, water, fuel, feeding and preparation utensils, education and medical supervision for as long as the infant requires it
- Governments should develop emergency preparedness plans that include support for breastfeeding prior to an emergency as well as an appropriate emergency response in line with internationally recognised guidance

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