‘We make a mistake with shoes [that's no problem] but... not with baby milk’: Facilitators of good and poor practice in distribution of infant formula in the 2014–2016 refugee crisis in Europe

Karleen D. Gribble1 | Aunchalee E. L. Palmquist2

1School of Nursing and Midwifery, Western Sydney University, Penrith, New South Wales, Australia
2Carolina Global Breastfeeding Institute, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

Correspondence
Karleen D. Gribble, School of Nursing and Midwifery, Western Sydney University, Locked Bag 1797, Penrith, NSW 2751, Australia.
Email: k.gribble@westernsydney.edu.au

Abstract
The Infant and Young Child Feeding in Emergencies Operational Guidance (OG-IFE) gives direction on providing aid to meet infants' and young children's feeding needs in emergencies. Because of the risks associated with formula feeding, the OG-IFE provides limited circumstances when infant formula should be provided in aid. However, distributions against this guidance are common, reducing breastfeeding so risking increased infant morbidity and mortality. This study sought to identify factors that contributed to following ('good practice') or not following ('poor practice') the OG-IFE regarding infant formula distribution in the 2014–16 refugee crisis in Europe. Thirty-three individuals who supported, coordinated, or implemented infant feeding support in the Crisis were interviewed regarding their experiences and views. Reflexive thematic analysis of transcribed interviews was undertaken. It was identified that presence of breastfeeding support, presence of properly implemented formula feeding programmes, understanding that maternal choice to formula feed should be considered within the risk context of the emergency, and positive personal experiences of breastfeeding contributed to good practice. Presence of infant formula donations, absence of properly managed formula feeding programmes, belief that maternal choice to formula feed is paramount and should be facilitated, and personal experience of insurmountable breastfeeding challenges and/or formula feeding contributed to poor practice. Governments, humanitarian organisations, and donors should ensure that infant and young child feeding in emergencies preparedness and programmes are adequately resourced. Emergency responders should be appropriately trained with training including infant feeding experience debriefing. Health and emergency organisations should provide maternity protections enabling employees to breastfeed as recommended.

KEYWORDS
bottle feeding, breastfeeding, disasters, humanitarian assistance, infant, infant formula, mothers

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1 | INTRODUCTION

Infants and young children have health vulnerabilities because of their specialised nutritional requirements, immature immune systems and dependence on others (Kouadio et al., 2012; World Health Organization, 2009). In low- and middle-income countries, early cessation of exclusive or any breastfeeding is responsible for 72% of infant hospitalisations for diarrhoea and 57% of hospitalisations for respiratory tract infections (Victora et al., 2016). In these contexts, infants who are not breastfed are eight times more likely to die than their exclusively breastfed counterparts (Victora et al., 2016). Even in the United Kingdom, 31% of infant hospital admissions for infections are attributable to cessation of breastfeeding before three months of age (Payne & Quigley, 2016).

Environmental conditions associated with emergencies such as poor sanitation, overcrowding and food, water, power and health care shortages increase infant mortality (Kouadio et al., 2012). During the 1991 Kurdish refugee crisis in Iraq, diarrhoea, dehydration and malnutrition caused the death of 12% of infants in one area over a 2-month period (Yip & Sharp, 1993). Morbidity and mortality disparities between breastfed and non-breastfed infants widen in emergencies. A diarrhoea outbreak associated with flooding in Botswana in 2006 caused the death of more than 500 children; non-breastfed infants were disproportionally affected. They were 30 times more likely to present at hospital with diarrhoea than breastfed infants (Arvelo et al., 2010) and in an inpatient hospital cohort, 27/28 of children who died were not breastfed in the week prior illness onset (Creek et al., 2010).

Emergency aid provided to infants and young children impacts vulnerability. Interventions that facilitate breastfeeding, secure safe food, water and immunological support. Enabling breastfeeding also promotes maternal attachment and protective behaviours, fostering physical safety and good psychological health (Gribble et al., 2020). If infants cannot be breastfed, ensuring access to targeted, continuous and comprehensive artificial feeding support, including infant formula; clean water; fuel; washing, feeding and preparation implements; individualised education, and health support, mitigates risk (Gribble & Fernandes, 2018). However, providing improved infant and young child feeding in emergencies (IYCF-E) interventions can be challenging and the aid provided can do more harm than good. In particular, inappropriate distributions of infant formula reduce breastfeeding, increasing rates of infectious disease and endangering breastfed infants (Borrel et al., 2001; Hipgrave et al., 2012; MirMohamadalile et al., 2019). Non-breastfed infants are also endangered by inappropriate distributions of infant formula as these distributions are characterised by discontinuity of supply and absence of necessary support (Gribble & Fernandes, 2018).

The Infant and Young Child Feeding in Emergencies Operational Guidance (OG-IFE) was developed to ensure that IYCF-E interventions provide benefit and avoid harm (IFE Core Group, 2017). It establishes minimum standards for aid provision in IYCF-E and is endorsed by the World Health Assembly (WHA) and the Sphere Handbook (Seventy-First World Health Assembly, 2018; Sixty-Third World Health Assembly, 2010; Sphere Association, 2018). The International Code of Marketing of Breastmilk Substitutes (WHO International Code) (World Health Organization, 2021) is embedded within it. The OG-IFE describes limited circumstances when infant formula should be provided in emergencies. These include the following: to supplement the mother’s milk as she moves from mixed feeding to exclusive breastfeeding; where the infant’s mother is absent, deceased or has rejected the infant; the infant is replacement fed in the context of HIV; the mother is very ill and cannot breastfeed; the mother is a sexual violence survivor and does not wish to breastfeed; and where a wet nurse or donor human milk is unavailable (IFE Core Group, 2017). Indications also include where the infant was formula fed before the emergency and the mother or caregiver is in the process of relactation or the mother does not wish to relactate (motivation to relactate is a prerequisite for successful relactation, Gribble, 2004). Outside of the context of relactation or experience of sexual violence, maternal desire to formula feed is not indicated as a reason to provide infant formula. The OG-IFE requires individual assessment of need for infant formula, proscribes solicitation or acceptance of donations of infant formula, and describes the package of support to be provided where use is indicated (IFE Core Group, 2017). Table 1 presents a summary of the key points of the OG-IFE regarding interventions to protect and support non-breastfed infants. Although the OG-IFE has existed since 2001 (Interagency Working Group on Infant and Young Child Feeding in Emergencies, 2001), poorly targeted and supported distributions of infant formula remain common in emergencies (Gribble & Fernandes, 2018; Hirani et al., 2019).

Key Messages

- Good practice in infant formula distribution was facilitated by the presence of appropriate support for breastfed and non-breastfed infants, an understanding that maternal desire to formula feed should be considered within the context of risk posed by emergencies and emergency responders’ positive personal breastfeeding experiences.
- Poor practice in infant formula distribution was facilitated by the presence of infant formula donations, absence of proper formula feeding programmes, a belief that maternal choice to formula feed is paramount and emergency responders’ poor personal breastfeeding experiences.
- Breastfed infants are placed at increased risk where poorly implemented artificial feeding programmes are absent.
- Governments and emergency organisations should undertake IYCF-E preparedness, establish appropriate IYCF-E programmes and empower humanitarian responders to support appropriate IYCF-E.
In emergencies, the use of breastmilk substitutes (BMS) requires a context-specific, coordinated package of care and skilled support to ensure the nutritional needs of non-breastfed children are met and to minimise risks inappropriate BMS use.

Where an infant requires BMS feeding should be determined through individual assessment by a qualified health or nutrition worker.

Where an infant is not breastfed, ways of providing breastmilk should be explored, in priority order: relactation, wet nursing and donor human milk.

Where infants are under six months of age and cannot access breastmilk, infant formula meeting Codex Alimentarius standards is the appropriate BMS.

Where infants are over six months of age and cannot access breastmilk, infant formula may be a suitable BMS depending on the circumstances. Other milks such as heat-treated animal milk, reconstituted evaporated milk, fermented milk or yoghurt may also be given. Follow-on or toddler milks should not be provided.

Where BMS is required, it should be purchased. Donations of BMS should not be solicited or accepted but should be actively advocated against.

BMS labelling should comply with the International Code of Marketing of Breastmilk Substitutes.

Access to clean water, fuel and washing, sterilising, feeding and preparation implements for formula feeding should be provided to formula feeding caregivers if these resources not already available.

Temporary indications for providing BMS include during: relactation, the transition from mixed feeding to exclusive breastfeeding, a short-term separation of mother and infant, until a wet nurse or donor human milk is available.

Longer-term indications for providing BMS include where: an infant was not breastfed prior to the emergency and the mother is unwilling or unable to relactate; the infant is established on replacement feeding in the context of HIV; the infant is orphaned, motherless or rejected; infant or maternal medical conditions prevent breastfeeding; the mother is a rape survivor not wishing to breastfeed.

Individual education on the proper use of BMS (including preparation and hygiene) and follow up monitoring of infant health and growth must be given where BMS is provided.

Infant formula should be provided for as long as the child needs it or until the infant is at least six months of age.

Feeding bottles should be discouraged and cup feeding encouraged.

Cross sectorial engagement should be undertaken to protect non-breastfed infants including with: health, logistics, media and communications, child protection, early childhood development, food security and livelihoods, shelter, cash transfer programmes and camp management.

During 2014–2016, millions of people, primarily from Syria, Iraq and Afghanistan, sought refuge in Europe (Piguet, 2020). Very large numbers of pregnant women and mothers caring for infants and young children were among these refugees (Kofman, 2019). Normative use of infant formula in Syria and Iraq meant many infants arrived in Europe partially or fully infant formula dependent (Palmquist & Gribble, 2017). This, as well as the fast transit of refugees, made providing infant feeding support particularly challenging (Modigell et al., 2016). As a part of a larger study examining IYCF-E volunteering in the refugee crisis in Europe, the present report considers factors influencing the following or not of the OG-IFE regarding distribution of infant formula.

## Methods

A combination of qualitative research approaches, including a rapid ethnographic assessment (REA) (Bernard, 2018; Sangaramoorthy & Kroeger, 2020), narrative elicitation (Bhattacharya, 2017; Cartazzi, 2001) and semi-structured interviews, were used to collect data for this cross-sectional, interdisciplinary study. The methodology was responsive to the time-sensitive nature of the research, ethical considerations related to conducting research during a humanitarian crisis and the geographic complexity of data collection (Siriwardhana et al., 2017). The data collection methods and analytic techniques that were incorporated into the research design reflect the authors’ respective disciplinary expertise and research training. Aunchalee Palmquist is a medical anthropologist and International Board Certified Lactation Consultant (IBCLC) with 27 years experience conducting ethnographic and applied qualitative global health research, including research specific to infant feeding. Karleen Gribble has been conducting qualitative research on infant feeding, including IYCF-E, for over 20 years and is a trained mother-to-mother breastfeeding counsellor and educator. Both investigators have provided guidance to local community, national and global health organisations regarding IYCF-E. Ethics approval for this study was obtained from the Institutional Review Board of Elon University.

Research participants included individuals who were supporting, coordinating or implementing infant feeding support to newly arrived refugees in Europe. They were selected using non-random purposive sampling with contact made on social media, in the field in Greece or France, or upon recommendation of other participants (“snowball sampling”). All were at least 18 years of age. Per the approved research protocol, participants provided their oral informed consent and permission to record, before interviews were initiated. In-person, unstructured interviews were undertaken by the authors during an REA from 3 March to 3 April 2016 in person in Greece, France and the United Kingdom. Prior to beginning the REA, written agreements and letters of support were obtained from local organisations providing assistance related to IYCF-E. Participant observation were carried out by both authors in IYCF-E education sessions with breastfeeding counsellors, formal and informal refugee camps (including in mother–baby tents), in a hospital maternity ward where refugee women were birthing, and in supply warehouses. In these contexts, unstructured interviews were completed with volunteers supporting camp operations, health care workers, warehouse operations and food service operations. Observations in refugee camps focused on the quality of...
living conditions (shelter, water, sanitation and hygiene infrastructure and privacy); presence of humanitarian assistance; infant formula distribution practices; and access to breastfeeding support, health care and food. The authors recorded extensive fieldnotes after each visit to document observations.

Upon completion of the REA, additional participants involved in the IYCF-E response were recruited 20 July 2016 to June 2017 for semi-structured interviews. These interviews were conducted remotely via Skype® and allowed for inclusion of individuals located in diverse countries including outside of those where the REA occurred. Questions addressed participants’ motivation for providing infant feeding support in the refugee crisis in Europe, the training they had undergone, their knowledge of IYCF-E guidance, the sort of support they had provided, and their views on distribution of infant formula in emergencies. The interviews followed a narrative inquiry approach and were conducted in English, recorded, and transcribed verbatim. This approach to data collection facilitated the opportunity to employ a comparative perspective on issues related to the refugee crisis in Europe.

For the present report, data were analysed with a goal of developing conceptual models describing factors contributing to the following or not of the OG-IFE regarding infant formula distribution. All interviews were read to facilitate immersion in the data following which, text discussing management of infant formula was excerpted in Dedoose® for analysis. A reflexive thematic analysis was carried out involving familiarisation with the data including note taking, initial deductive coding, and thematic generation (Braun et al., 2019; Braun & Clarke, 2006). In code generation, practices regarding distribution of infant formula were considered ‘good practice’ where they were aligned with the OG-IFE and ‘poor practice’ where they were not (IFE Core Group, 2017). Authors discussed formulation of themes and their interpretation in the context of broader REA observations, fieldnotes and the full set of transcribed interviews. Themes were mapped to produce conceptual models. Six globally experienced humanitarians in IYCF-E were asked to provide comment on the conceptual models and their explanation to authenticate interpretations before finalisation of the manuscript.

3 | RESULTS

Thirty-three interviews were conducted, of which 30 contained content regarding distribution of infant formula and were included in analysis. Study participants were from Australia, Croatia, Denmark, France, Greece, Ireland, Israel, Spain, Syria, the United Kingdom and the United States of America and had provided infant feeding support in Croatia, France, Greece and Syria. Participants included individuals who were professional humanitarians; IBCLCs; midwives; mother-to-mother breastfeeding counsellors (from five organisations), a humanitarian student; a social worker; a child protection worker; a doctor; a doula; and individuals with no child, health or infant feeding background.

Four major themes describing factors contributing to good practice and three major themes reflecting factors contributing poor practice in distribution of infant formula were identified. Each theme and associated sub themes are presented below, along with explanations and illustrative quotes. The conceptual models developed from the data are in Figures 1 and 2 and show the resources, beliefs, knowledge, attitudes, circumstances and experiences that contributed to good or poor practice in the distribution of infant formula in the refugee crisis in Europe and the connections between these factors.

3.1 | Factors contributing to good practice in distribution of infant formula

Presence of breastfeeding support, presence of a properly managed formula feeding programme, understanding maternal choice in a context of risk, and positive personal experiences of breastfeeding contributed to good practice in the distribution of infant formula.

3.2 | Presence of breastfeeding support

Presence of breastfeeding support facilitated good practice as aid providers could give mothers having breastfeeding difficulties with assistance beyond supplying infant formula. Breastfeeding support was enabled through purposeful investment in policies, procedures, personnel and facilities. ‘We trained volunteers to do like first initial assessment of mother with small child. Is the mother breastfeeding, not breastfeeding? If she’s having difficulties she would... receive support, encouragement... directed to this private, warm space’ (Participant 27).

An important facilitator of breastfeeding support was the belief that breastfeeding counselling empowers mothers, ‘I wanted to empower them to feel like they are doing the best, they are good mums... for me that is what is underneath support’ (Participant 2). This was closely tied to an understanding that counselling could enable women to breastfeed in difficult circumstances. ‘There was a very good system... the army would provide formula milk but that would only be distributed... after an assessment in relation to breastfeeding and there was a lot of support for women and we had an awful lot of success of actually getting women back to full breastfeeding’ (Participant 17). Finally, the presence of individuals who had skills and knowledge to provide breastfeeding support and up-skill others, facilitated breastfeeding support. ‘They have very skilled counsellors and they have a very strong volunteer network. So they started to come as volunteers... it helped us to establish those standards in the camp and practice those and implement those standards’ (Participant 27).

3.3 | Presence of appropriate formula feeding support

Presence of appropriate formula feeding support promoted good practice as it provided a referral pathway so that those concerned...
about infants did not feel compelled to distribute infant formula themselves. For example, ‘We were working quite well with the other beach rescue and the warehouse people... they knew what we were doing. So one warehouse just went, “You’re the experts, we won’t hand out formula”... people would come to us and say, “Oh, I found this mother. Can you talk to her?”’ (Participant 4).

Presence of proper support for formula feeding was facilitated by organisations taking leadership and investing in appropriate infant formula management policies and interventions as well as by organisational cooperation. ‘We stopped mass distribution of BMS [breastmilk substitutes] in the camp. We agreed that all organisations who have breastmilk substitutes would guide their donations to [the medical NGO]... who will distribute it when it is needed’ (Participant 27).

Resources to support implementation of the OG-IFE also promoted good practice. The Interim Operational Considerations for the Feeding Support of Infants and Young Children Under 2 years of age in
Refugee and Migrant Transit Settings in Europe (UNICEF, UNHCR, WHO, Save the Children, & ENN, 2015) was mentioned by several participants as helpful. ‘We would follow the Interim Operational Guidelines (sic)... Especially the... minimum assessment of needs, so which questions do you need to ask for both breastfeeding mothers and non-breastfeeding mothers. Those were concrete questions... It’s not about theory it’s... how do you approach these women and what do you need to do... we found it very helpful’ (Participant 16).

3.4 Understanding maternal choice in a context of risk

Those who followed good practice understood that given the risks, not facilitating maternal desire to formula feed was the responsible course of action. Observing the harm of formula feeding and having knowledge of the risks of formula feeding contributed to individuals being unwilling to facilitate maternal desire to formula feed outside of the conditions provided for in the OG-IFE. ‘There were dangerous things happening with formula being handed out unnecessarily. The doctors I was working alongside in [the refugee camp] they’d dealt with it and so... they were recognising that it was unsafe feeding practices that were causing medical issues... they were on board... I think it was just a symptom of having seen that’ (Participant 23).

Emergency responders who had a long-term view were aware that providing infant formula to alleviate short-term distress could cause significant long-term harm. ‘You will have caregivers screaming and crying at you and I think there is a real concern about the kind of mental stress that you place a caregiver on by refusing them... but if you look a bit further at well, how much more stressful is it when your baby is sick in an emergency and you can't get the healthcare that they need’ (Participant 7). And they prioritised long-term maternal and infant well-being. ‘So basically we did not give out baby milk... and we tried to encourage them to keep breastfeeding... When I was training the volunteers [I would] explain to them that they might find milk now, with us, but as they move through Europe things get harder and harder... the safest way is for them to keep producing their own milk but to keep producing their own milk they have to keep breastfeeding because if they start giving the milk now their breastmilk will dry up’ (Participant 28). Participants who usually worked in non-emergency settings described how the increased risk of the emergency required them to adjust their practice. ‘In crisis, you think only about the health and life of this baby. It’s not that much an issue in normal situation... You wouldn’t say you have to breastfeed, but here in crisis you say, breastfeeding is so important, you should try as much as you can’ (Participant 30). However, participants with little to no prior emergency experience did not appear to be more likely to act in contravention of the OG-IFE than those with extensive emergency experience.

A number of participants noted that viewing formula feeding as a medical issue, facilitated support of health authorities and conceptualisation of infant formula as a product with a legitimate use but requiring careful, controlled distribution. ‘We felt quite strongly that it was a medical issue and shouldn’t be dispensed lightly... we kept on notifying Ministry of Health and informing them of the danger that poses and insisting that ready to use formula be purchased and eventually some funds were put aside’ (Participant 16).

Participants described instances where advocacy had facilitated good practice. Such success occurred when there was effective communication by the advocate, and when the advocate was respected or viewed as an expert. For example, a manager of a donations warehouse described how medics had enabled him to understand that infant formula was a special category of donation and persuaded him to treat infant formula like a medicine. ‘We were working together with some doctors that warned... said that we should be cautious... we had this special section at the warehouse where old medicines were kept and we didn’t touch it until a doctor would come and take the good things and throw out the bad things. And it was kind of the same with the formula... Then we said we’re not going to give this out to anyone. We make a mistake with shoes [that’s no problem] but not with medicine, not with baby milk... we became strict’ (Participant 31).

Finally, for some participants, a positive personal experience of breastfeeding provided them with knowledge of the risks of formula feeding, importance of breastfeeding, ways that breastfeeding could be supported or undermined, and confidence in breastfeeding. This motivated support for breastfeeding and ensured that infant formula was properly managed. ‘There is a weekly meeting of all the organisations... the lady from the [NGO] who was in charge of the program was a breastfeeding mum so she decided to do this well... try to follow guidelines on how to give out formula correctly’ (Participant 8).

3.5 Factors contributing to poor practice in distribution of infant formula

Presence of infant formula donations, absence of a properly managed formula feeding programme, a belief that maternal choice to formula feed is the paramount consideration in determining whether formula feeding should be facilitated, and personal experiences of insurmountable breastfeeding challenges and/or formula feeding contributed to poor practice in distribution of infant formula.

3.6 Presence of infant formula donations

Donations of infant formula undermined good practice and perpetuated inappropriate distributions. As one participant described, ‘Within 24 hours of coming home from hospital, those mothers already had cans of formula in their tents... every week that I went, there would be another donation... formula arrives, and one of my breastfeaters starts formula feeding... that was being repeated at lots of the other [places]. We don’t know who they were, but kind people would just bring formula’ (Participant 4).
3.7  |  Absence of a properly managed formula feeding programme

Absence of properly managed formula feeding programmes facilitated poor practice as those without knowledge of how to properly support formula feeding in emergencies sought to fill the gap. Participants noted that a lack of organisational leadership and resourcing (including funding) contributed to this absence. ‘There’s... a real lack of major NGOs organising anything... So there might be medics saying, “You shouldn’t be using powdered formula.” but they don’t provide an alternative... so some of those volunteers might be asking for donations of formula’ (Participant 23).

3.8  |  Belief that maternal choice is paramount and should be facilitated

A belief that formula feeding should be facilitated if it is what mothers want supported poor practice. This belief was emblematic of participants’ perception that maternal choice is paramount regardless of the circumstances and was underpinned by a conviction that mothers know what they need. ‘These women are risking their lives so that their children can grow [and] can live. And if they say that their milk is dried up and they are done, then they’re done... I should not even think that I should try to change her mind’ (Participant 21). This belief was supported where aid providers and mothers lacked knowledge about the relationship between stress and lactation and falsely believed that breastfeeding is fragile and not possible when women are stressed, traumatised or exhausted. ‘I know that the research doesn’t say that stress will dry up your milk, but if you believe that, because this is what some of the women... will tell me, because of what they experienced... “My milk no good”’ (Participant 18). In the context of these beliefs, participants described recommendations to offer breastfeeding counselling to mothers requesting infant formula as inappropriate or harmful. ‘If someone comes into a clinic and they’ve been walking for five days and they’re absolutely exhausted, I’m just going to give the formula, I’m not going to force a mum to breastfeed at that point, it’s too hard’ (Participant 6). It was believed by some participants that infant feeding practices cannot be changed in emergencies and so breastfeeding promotion and counselling is ineffective. ‘At the end of the day people will do what they want... behaviour change is not going to happen in an emergency’ (Participant 13).

Belief in a right to informed choice in infant feeding underlay many participants’ explanations of why they facilitated maternal desire to formula feed by providing infant formula. For example, ‘it’s about their choice, because that’s the fundamental bottom line isn’t it, if they have all the information, it’s just their choice’ (Participant 9) and ‘I would feel really uncomfortable [with not giving infant formula to a woman who asked for it]... I think mothers have the right... to choose however they want to feed their child, I just really believe there should be more informed consent’ (Participant 20). Some viewed not facilitating maternal choice, regardless of circumstances, as showing a lack of respect for women and a judgemental attitude. ‘The people that are really, really pushing for the informed choice time and time again... had the view that we who promote breastfeeding seem judgmental’ (Participant 7). Thus, a contradiction was evident as assertions in support of informed decision making were made alongside views that providing information about breastfeeding was judgemental. In addition, the commitment to informed choice in infant feeding was not boundless as some who were willing to provide infant formula upon maternal request, denied mothers’ requests for sugar to be added to infant formula, as shown in the following conversation.

Interviewer: | So in [one part of the camp] they were providing formula with added sugar because the women asked for it... Whereas in other places they went, ... ‘No, we’re not doing that,’ ... So why is that OK [and] a woman who’s breastfeeding saying, ‘No, I’m sorry I’m not going to give you formula,’ why is that not OK?
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Participant 20: | Well, because it’s not my choice, it’s not my decision on how someone else feeds their child.
Interviewer: | But they want to have sugar, so why aren’t you giving them sugar?
Participant 20: | So that’s not OK because that’s dangerous for the baby.

Participants who distributed infant formula against the OG-IFE made statements indicating they believed refusing to provide infant formula is harmful and giving infant formula is kind and compassionate. As one participant stated, ‘So just the amount of stress that these women have had to go through. They lose everything... they really thought they were going to die... So what then, when the woman is like, “Please give me a bottle so I can feed my baby,” and you say no? It’s cruel’ (Participant 21).

Even when individuals were trying to follow recommended practice, they found it hard to say no to mothers they perceived as being in a desperate situation. ‘She got so stressed out that she just gave formula because she just thought, “Who am I to say no, and how can I not, they’re like desperate.” And she called me up in tears that night going, ‘I broke protocol’’ (Participant 6).

Viewing facilitation of maternal choice to formula feed as an imperative was supported by an inadequate knowledge of formula feeding risks evidenced in participants’ comments. One participant who acted in line with the OG-IFE stated, ‘I don’t think people are understanding the risks involved and that there’s international protocols in place for a reason’ (Participant 7). It was also evident that those who implemented poor distribution practices did so with a short-term view, not realising that their actions would impact the long-term well-being of infants and mothers. ‘The potential for babies to be falling ill due to infant feeding practices is more likely to be felt three or four weeks down the line or six months down the line when they are still on the refugee trail. And so there was a real feeling that they were doing what... needed to be done now and they weren’t thinking about the future’ (Participant 23).

Willingness to improperly distribute infant formula continued where advocacy failed because of ideology, lack of respect for the...
advocate, or poor advocacy method. ‘There was a lot of what I call breastfeeding Nazis were like showing up at my clinic... wanting to know why women aren't breastfeeding and why we're giving away formula... Like I believe breast is best of course, but when you're doing this kind of acute disaster situation, you have to do it’ (Participant 21). A belief that the OG-IFE guidance did not apply impeded advocacy efforts. ‘You don't have the traditional cluster system, there's no leadership, government accountability, it is peer-to-peer saying, well I have Operational Guidance [OG-IFE] that says this and they're saying, yeah well you have this guidance but it doesn't apply here’ (Participant 15).

Finally, personal experience of insurmountable breastfeeding challenges and/or formula feeding supported facilitation of formula feeding on maternal request. Participants who described having insufficient breastmilk, especially if connected to stress, used this as a frame of reference for providing infant formula when mothers described similar circumstances. One participant who collected, and literally distributed, donations of infant formula described how, ‘Some women are breastfeeding here but because they don't eat enough, they don't have enough milk so they give the breast feed and give also the powdered milk. This is also how I did with my son. It happens’ (Participant 29). Individuals' sympathy for mothers arising from their own experience of disempowerment or breastfeeding challenges evoked strong emotions and influenced beliefs around maternal choice. ‘But here it's not a humanitarian professional speaking right, it's a French feminist mum... I have a four-month-old so giving birth experiences is not so far away... [I] felt quite vulnerable... it's just like they have no idea about how powerful they are’ (Participant 13). Inappropriate application of personal experience was noted. ‘Every single presentation I've done on IYCF-E someone in the audience has piped up and gone but what about maternal choice... But what I've realized is that I think a lot of people also confuse this with their own personal experience. I think people who have had difficulties [with breastfeeding] themselves, they really take those personal experiences and they apply them to the whole emergency’ (Participant 15).

**4 | DISCUSSION**

This analysis of infant feeding support in the 2014–2016 refugee crisis in Europe reveals barriers and facilitators of good and poor practice in the distribution of infant formula. As outlined below and summarised in Table 2, the findings suggest that practice could be improved by increasing investment in support for breastfed and non-breastfed infants, increasing knowledge and advocacy regarding how to protect infants in emergencies, and accounting for the personal infant feeding experiences of aid providers.

Anecdotally, there has been some concern that any support for formula feeding, including as described by the OG-IFE, risks undermining breastfeeding in emergencies. However, what this research reveals, is that breastfed infants are made more vulnerable by absence of properly implemented artificial feeding programmes. Resources to support provision of aid to non-breastfed infants exists, including descriptions of previously implemented programmes and implementation guidance (Alsamman, 2014; Emergency Nutrition Network for addressing infant feeding in emergencies including:

- Implement IYCF-E policies and planning in line with the OG-IFE
- Establish (pre-emergency) IYCF programming including health system and community support
- Legislating the WHO International Code including subsequent WHA resolutions
- Utilise technical support and tools for training, monitoring, advocacy and preparedness from the WHO as described in WHA 71.9

| TABLE 2 Actions to improve practice in the distribution of infant formula in emergencies |
| --- |
| Undertake IYCF-E preparedness including: |
| • Implement IYCF-E policies and planning in line with the OG-IFE |
| • Establish (pre-emergency) IYCF programming including health system and community support |
| • Legislating the WHO International Code including subsequent WHA resolutions |
| • Utilise technical support and tools for training, monitoring, advocacy and preparedness from the WHO as described in WHA 71.9 |

Increase knowledge of humanitarian actors on how to protect infants in emergencies including:

- How breastfeeding protects infants, the robustness of breastfeeding and how breastfeeding counselling enables breastfeeding continuance
- How formula feeding increases risk of infection, food insecurity and malnutrition
- How donations of infant formula harm breastfed and infant formula dependent infants
- The package of resources required to support formula fed infants
- Institutionalise the OG-IFE in organisational training

Empower humanitarian responders to support appropriate IYCF-E via:

- Delivering infant feeding counselling training including a component on supporting breastfeeding women who request infant formula
- Ensuring employees and volunteers involved in IYCF-E engage in reflective practice about their personal infant feeding experiences so that they do not inappropriately impact their actions in emergencies
- Applying an ethical framework (including the principles of autonomy, non-maleficence, beneficence, justice and health maximisation) to decisions concerning the provision of infant formula in emergencies
- Providing appropriate maternity leave within Ministries of Health and emergency organisations to enable health and humanitarian workers to breastfeed their own infants and young children as recommended

Abbreviations: IYCF-E, infant and young child feeding in emergencies; OG-IFE, Infant and Young Child Feeding in Emergencies Operational Guidance; WHA, World Health Assembly; WHO, World Health Organization.

et al., 2007; Emergency Nutrition Network & IFE Core Group, 2021; Global Nutrition Cluster Technical Alliance, 2020; Gribble & Fernandes, 2018; IFE Core Group, 2017; Talley & Boyd, 2013). Nonetheless, gaps remain including in supporting large numbers of formula dependent infants and scaling up relactation interventions (Prudhon...
et al., 2016). Alongside support for infant formula dependent infants, coordinated efforts to prevent and manage donations are necessary.

The importance of humanitarian agencies and governments engaging in emergency preparedness regarding IYCF-E should be recognised. Pre-emergency presence of infant and young child feeding (IYCF) programmes and policies have been observed to support high quality IYCF-E (Aguayo et al., 2015). Ways of improving support for breastfeeding at a country level have been identified and include: health system, family and community support for breastfeeding, workplace maternity protection and legislation of the WHO International Code (Rollins et al., 2016). However, inadequate planning, policies and resourcing to meet the feeding needs of infants and young children in emergencies is a global problem (Gupta & Suri, 2016). Seeking to address this concern the WHA recently called on the Director General of the World Health Organisation (WHO) to make available, ‘technical support to Member States in mobilizing resources, including financial resources, and monitoring and implementation of WHO recommendations to support infant and young child feeding, including in emergencies’ and ‘to develop tools for training, monitoring, advocacy and preparedness for the implementation of the operational guidance on infant and young child feeding in emergencies and support Member States to review experiences in its adaptation, implementation and monitoring’ (Seventy-First World Health Assembly, 2018). This investment and support are clearly needed.

Training programmes for humanitarians should include content on how breastfeeding protects infants and mothers in emergencies; the robustness of breastfeeding when mothers are stressed, traumatised or malnourished; and how breastfeeding counselling assists women to continue or resume exclusive breastfeeding (Creek et al., 2010; Gribble et al., 2011, 2020; Gribble & Fernandes, 2018). Training programmes should also include content on how formula feeding increases susceptibility to infection, food insecurity, malnutrition and maltreatment in emergencies; and how donations and inappropriate distributions of infant formula decrease exclusive breastfeeding (Gribble et al., 2020; Hipgrave et al., 2012). Humanitarians need to be trained to consider the long-term consequences of immediate decisions regarding infant formula provision.

This research confirms that advocacy regarding how to support breastfed and non-breastfed infants in emergencies, including in the media, is needed. However, care should be taken to redress myths and misinformation in a way that avoids reinforcing erroneous beliefs (Cooking & Lewandowsky, 2012; Gribble, 2013; IFE Core Group, 2018). At an organisational and individual level, advocates will be most effective where they are respected by the target group. As identified in this study, advocacy should promote conceptualisation of infant formula as more like a medicine than a food in emergencies. Organisations and individuals should be made aware that individual assessment of need for infant formula is required (IFE Core Group, 2017). In addition when infant formula is supplied, in all but exceptional circumstances, it includes a commitment to ensure a continuous supply of infant formula; water, fuel, cleaning and feeding implements; education; and health care support until the infant is at least 6 months of age (Gribble & Fernandes, 2018; IFE Core Group, 2017). Such awareness of the extent of the resources required to support an infant to be formula fed in a context of scarcity provides discouragement for all but tightly controlled distributions of infant formula.

Emergency responders’ views that they should facilitate maternal desire to formula feed is a primary driver of poor practice in IYCF-E responses and so must be addressed. Advocacy and training should increase understanding of why women request infant formula absent a genuine need and why providing infant formula to facilitate maternal choice when it is likely to cause significant harm is not kind or ethical (Gribble, 2014). Training on ethics is necessary so that those involved in IYCF-E are aware that responses to requests for infant formula require attention to not only the principle of autonomy (maternal choice) but also non-maleficence (do no harm), beneficence (do good), justice (fair use of resources) and health maximisation (population health) (Schroder-Back et al., 2014). Crucially, frontline aid providers, including medical personnel and those providing nutrition support, need to be equipped with infant feeding counselling skills so they are able to appropriately support and assist mothers and caregivers requesting infant formula, including those who are refused. Strategies used in medicine to prevent inappropriate prescription of medications that can cause harm when dispensed improperly may be instructive (Wells & Cronk, 2020; Wyse et al., 2019).

Personal breastfeeding experiences were identified as a factor that could support good or poor practice. Participants with successful breastfeeding experience more commonly supported beliefs and actions that facilitated good practice. This observation is supported by research finding that doctors with extensive breastfeeding experience were most likely to be knowledgeable about breastfeeding, and to have confidence in the robustness of breastfeeding and their ability to assist breastfeeding women (Brodribb et al., 2008). In contrast, having formula fed their own infant as a result of insurmountable breastfeeding challenges and disbelief in breastfeeding counselling as an enabler of breastfeeding have been identified as facilitators of poor practice. Wright and Hurst (2018) found that nurses often thought about their infant feeding experiences at work and that their personal experience sometimes resulted in provision of poor information or support. Similarly, doctors whose infants ceased breastfeeding prematurely are less knowledgeable about breastfeeding and more likely to believe that breastfeeding and formula feeding are equal feeding methods (Brodribb et al., 2008).

Women who formula feed after experiencing insurmountable breastfeeding challenges have been found to experience feelings of guilt, shame, and failure (Bresnahan et al., 2019; Fallon et al., 2017; Holcomb, 2017). In order to maintain self-perception as ‘good mothers,’ women may justify formula feeding on the basis that they had no choice; downplay the importance of breastfeeding and risks of formula feeding; and rely on the principle that mothers, not others, know what is best for infants (Holcomb, 2017; Knaak, 2010; Murphy, 1999). These justifications parallel the beliefs supporting poor practice identified in this study. Those making appeals to informed choice, may in some cases be appealing for their own experiences and choices to be heard and respected.
In order to promote good practice, humanitarian organisations should provide infant feeding debriefing and reflexive practice training (Dykes, 2006) for those directly or indirectly involved in infant feeding responses. Furthermore, given the positive impact of successful breastfeeding on knowledge and practice, health and humanitarian organisations should ensure that they have adequate maternity provisions and adjust travel requirements so that employees are able to breastfeed their infants as recommended (World Health Organization & UNICEF, 2003). Health and aid workers should not be forced to wean their infants prematurely due to their employment.

5 | LIMITATIONS

This study was limited by not including participants from government agencies, including Ministries of Health, or mothers or caregivers of infants. Furthermore, participants were recruited based on their involvement in a single emergency which may limit applicability to other emergencies, particularly those in more resource poor contexts. Confirmation of the conceptual models and their explanation with humanitarians with expertise in IYCF-E was designed to mitigate against these limitations. However, it must be acknowledged that that the importance of factors contributing to good and poor practice will vary depending upon context. This research did not consider the complexities of how women make decisions regarding infant feeding in emergencies, nor address the drivers of maternal requests for infant formula. Future research should consider these issues.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

CONTRIBUTIONS

K. G. and A. P. conceived the research, analysed and interpreted the data and drafted the manuscript.

DATA AVAILABILITY STATEMENT

Research data are not shared.

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