

# Breastfeeding in emergencies and natural disasters: what health professionals need to know

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Dear Editors-in-Chief,

We would like to express our deep interest and concern regarding the crucial topic of breastfeeding in emergencies and natural disasters. This is a subject that deserves careful and urgent attention as we face an increasingly susceptible world to extreme and unpredictable events, such as the extratropical cyclone that struck the Taquari Valley in Rio Grande do Sul (Brazil), floods in Eastern Libya, the recent earthquake in the High Atlas Mountain range in Morocco, and Hurricane Idalia that hit Florida in the United States of America (USA). These events can directly impact how parents/caregivers feed children safely and appropriately.

As highlighted by the Centers for Disease Control and Prevention (CDC) of the USA, “during a natural disaster, the safest way to feed an infant is through breastfeeding”<sup>1</sup>. It is imperative to acknowledge that even amidst the chaos of natural disasters, breastfeeding plays a crucial role in protecting infant health, which becomes even more critical when considering that hygiene conditions may be poor during a crisis.

The Division of Nutrition, Physical Activity, and Obesity (DNPAO) of the CDC has developed a toolkit called “Infant and Young Child Feeding in Emergencies (IYCF-E)”<sup>1</sup>, providing data and materials for emergency preparedness and response teams, as well as for families and the general public. The goal is to ensure that children are adequately fed during the occurrence of a disaster<sup>1</sup>. In addition to the CDC, other institutions and international organizations such as the American Academy of Pediatrics (AAP), the International Lactation Consultant Association (ILCA), and the World Health Organization (WHO) have also published information on how to protect breastfeeding in emergencies and disasters<sup>2-4</sup>.

The IYCF-E underscores the importance of maintaining breastfeeding as a primary strategy and source of nutrition for children during emergency situations, as human milk requires no preparation and is readily available. Furthermore, it provides essential nourishment and hydration, protects against infectious and chronic diseases, and establishes an advanced communication system between mother and child<sup>5,6</sup>. It is worth noting that even in situations of stress and/or trauma

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resulting from these disasters, the breastfeeding mother/person can breastfeed without risk to the baby.

The immune protection and nutritional value of human milk need to be reinforced during catastrophic moments. In these situations, it is essential to avoid the use of infant formulas, as they can be susceptible to contamination if prepared with non-potable water, stored in non-sterile containers, or without access to refrigeration for proper preservation<sup>1,7</sup>. One study cites the negative impact of uncontrolled and inappropriate distribution of infant formulas during the L'Aquila earthquake in Italy, which hindered the recommended practices of IYCF-E and the continuation of breastfeeding<sup>8</sup>. Breastfeeding provides a vital bond between the dyad, offering emotional comfort and security in traumatic situations<sup>9</sup>. As reinforced by various studies<sup>10-13</sup>, the benefits of breastfeeding are numerous during times of crisis, and it is important to emphasize them in a strategic plan for such situations.

However, it is essential that the breastfeeding person, family members, and healthcare professionals, including speech therapists, be well-informed about how to protect and promote lactation in challenging circumstances. The Infant and Young Child Feeding in Emergencies (IFE) Core Group in its Operational Guidance for Emergency Relief Staff and Programme Managers<sup>14</sup> mentions the need for capacity-building for state personnel, non-governmental organizations (NGOs), and healthcare and nutrition volunteers, as well as community support. This approach aims to protect, promote, and support optimal feeding for infants and young children with integrated multisectoral interventions during emergencies<sup>14,15</sup>. The dissemination of clear and accessible information plays a vital role in ensuring that mothers can continue to breastfeed with confidence and safety.

A comprehensive literature review, published in 2021, described a major challenge faced by organizations establishing infant feeding programs in emergencies, which is the violation of the International Code of Marketing of Breastmilk Substitutes (the Code)<sup>16</sup> by other aid organizations and governments, such as the acceptance of donated infant formulas and their indiscriminate distribution<sup>17</sup>. Other studies also emphasize that few healthcare professionals or responders have been trained to provide breastfeeding and infant feeding counseling as well as support for this practice<sup>12,18,19</sup>.

To facilitate breastfeeding during emergencies, it is essential to create safe and suitable spaces where

breastfeeding individuals can nourish and nurture their babies, ensuring privacy and support during critical moments. These spaces can be established in temporary shelters and assistance centers. The CDC offers strategies, such as the use of signage, like "breastfeeding welcome here," "breastfeeding & pumping area," "wash and clean infant feeding supplies here," "human milk storage," "waste and diaper disposal," which can be crucial in guiding breastfeeding individuals<sup>1</sup>.

We must also consider the logistical barriers that mothers may face in crisis situations. Families who were feeding their baby with expressed milk need support for expressing and providing this milk. It is essential to provide guidance on manual expression<sup>1,20</sup>, as access to a breast pump may not be possible due to a shortage of hygienic conditions. The use of a disposable cup is suggested by the CDC<sup>1</sup> as an alternative method for feeding the baby, as access to clean water and soap may be restricted, making the use of artificial nipples that require proper sanitation impractical and potentially promoting infections when not properly cleaned. Through strategies that protect the continuity of breastfeeding, it is possible to ensure that breastfeeding mothers or individuals can continue to provide human milk, even when direct breastfeeding is not a viable option (refer to Chart 1 for more information).

We fully understand the relevance and urgency of the tireless work carried out by healthcare professionals, humanitarian organizations, and families facing natural disasters and emergencies. However, it is crucial to draw attention to an aspect often underestimated during these crises: the importance of breastfeeding in emergencies and natural disasters. In this challenging time, the distribution of artificial milk by the formula industry raises concerns regarding compliance with the Brazilian Code of Marketing of Infant and Toddler's Food, Teats, Pacifiers and Baby Bottles (NBCAL)<sup>21,22</sup> and The Code<sup>16</sup>. Ensuring that infants and children receive safe nutrition amid chaotic contexts is essential for the preservation of their lives and well-being.

In summary, breastfeeding in emergencies and natural disasters is a matter of utmost importance that requires immediate attention and coordinated action. We must acknowledge the invaluable role of breastfeeding in safeguarding infant health and providing appropriate emotional and nutritional support during times of crisis. Furthermore, it is essential to provide information, safe spaces, and essential supplies to ensure that breastfeeding mothers/individuals can

**Chart 1.** Strategies to protect breastfeeding in infants and young children during emergencies and natural disasters<sup>1-4,14,15</sup>

Exclusive breastfeeding infants	Babies on mixed feeding	Babies fed with expressed human milk
<ul style="list-style-type: none"> <li>• Keep the baby and breastfeeding mother together to prioritize on-demand feeding.</li> <li>• Encourage constant handwashing.</li> <li>• Promote families to breastfeed whenever and wherever they want in the shelter. However, providing signage for specific locations for more private breastfeeding respects the cultural and individual diversities of each breastfeeding mother.</li> <li>• Assure the breastfeeding individual that even under stress or with limited food supply, it is possible to maintain milk production.</li> <li>• Provide peer counseling or breastfeeding support groups, access to healthcare professionals, structural support that keeps mothers and babies together, and use of media for encouragement.</li> <li>• Identify other breastfeeding families within the shelter who may be willing to serve as peer support for a family in need.</li> <li>• Maintain an updated list of healthcare professionals and lactation experts to assist couples experiencing breastfeeding difficulties.</li> </ul>	<ul style="list-style-type: none"> <li>• Ask families how they are feeding their babies and what kind of support and items they need.</li> <li>• Never routinely distribute or donate formula to families. This practice can convey the incorrect information that human milk is insufficient or unsafe during an emergency.</li> <li>• Suggest offering the breast on-demand, including before and after supplementation.</li> <li>• If the baby receives infant formula in addition to breast milk, it is important that: <ul style="list-style-type: none"> <li>- Prepare the formula with clean water and use the exact measurement suggested on the container.</li> <li>- Keep the formula in a cool, dry place with the lid tightly closed.</li> <li>- Do not prepare in advance and do not reuse leftover formula.</li> <li>- NEVER dilute the formula – too much water may not meet the baby’s nutritional needs. Too little water can make the baby’s kidneys and digestive system work too hard and can cause dehydration.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Provide guidance on storing expressed human milk for families arriving with pumped milk. Transfer it immediately to a refrigerator or freezer. Remember to label the container with the mother and child’s name.</li> <li>• Advise manual expression, and the use of an electric pump should only be recommended if it’s possible to clean the equipment with soap and water.</li> <li>• If the electric power goes out, keep the freezer door tightly closed and move the containers to the back of the freezer.</li> <li>• The milk is still considered frozen if ice crystals can be seen in the milk.</li> <li>• Once thawed, the milk should be used within 24 hours and cannot be refrozen.</li> <li>• If the milk is not used after 24 hours, discard it. When it comes to safe breast milk storage, remember: when in doubt, throw it out.</li> </ul>
<p><b>What utensil to use for the provision of expressed human milk or infant formula:</b></p>		
<ul style="list-style-type: none"> <li>• The use of a cup is an alternative way to feed infants and protect breastfeeding, especially when they cannot breastfeed directly or when supplementation is necessary. Therefore, even in emergencies or disasters, this option should always be considered. Provide cups for feeding infants in shelters, and they should be cleaned with soap and water after each use.</li> <li>• In the absence of clean water for proper and safe cleaning of cups and other utensils, the use of disposable cups should be encouraged. <u>Disposable cups</u> should be used <u>only once</u> and discarded afterward.</li> </ul>		

continue to breastfeed with confidence, even in the most adverse circumstances.

We believe it is imperative for scientific organizations, professional boards, and the government to intensify their efforts in promoting specialized training for professionals who play a crucial role in assisting infants and children during emergencies and natural disasters. By investing in training and awareness, we might be better prepared to effectively address such challenges, ensuring the well-being and health of the most vulnerable populations.

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#### Authors' contribution:

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