

Formula-fed babies at risk in emergencies: New study finds how to better prepare and protect infants

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(Medical Xpress) -- Recent natural disasters in Australia, New Zealand, Japan and the United States have shown even in developed nations infants - especially those fed formula - are vulnerable. Now a new study has found detailed emergency preparedness information specifically for parents and carers could help protect infants from the worst of disaster related harm.

The urgent need to better inform the community was recognised by Dr Karleen Gribble from the University of Western Sydney School of Nursing and Midwifery, and Dr Nina Berry from the University of Wollongong Centre for Health Initiatives, who have published a review today in the *International Breastfeeding Journal* which details how those who care for infants can prepare for an emergency.

The authors report the needs of infants exclusively breastfed are guaranteed by the presence of their mother; however, protecting the health and wellbeing of formula-fed infants requires extensive emergency supplies.

They recommend emergency management authorities provide advice which distinguishes between breastfed and formula-fed and emphasise that emergency packs are not just extra formula.

Dr Gribble says the challenges of supplying critical and appropriate food

and liquid in emergencies places formula-fed infants at higher risk of serious illness and even death.

"In developed countries, good infrastructure, including easy access to clean water, electricity and medical care, means that few infants die as a result of formula feeding. However, when an emergency occurs and essential services are cut, the resources that make formula feeding relatively safe can be severely limited," says Dr Gribble.

"During emergencies the infant and their caregiver are placed in similar conditions to those experienced in developing countries where [bottle feeding](#) is very difficult and frequently fatal."

The study outlines, in detail, the emergency kits carers should have ready in case essential services such as water, electricity and gas are unavailable.

An emergency kit for mothers of infants who are exclusively breastfed is minimal, comprising approximately 100 disposable nappies and 200 nappy wipes, a supply sufficient for one week.

"Mothers can continue to breastfeed during an emergency, neither stress nor temporary lack of food has any impact on milk production and mothers can even increase their milk supply if needed through more frequent breastfeeds. In this way, breastfeeding mothers can easily provide their infants with safe food and water and with immune factors to protect from infection," says Dr Gribble.

"An emergency kit for a formula-fed infant requires a great deal more resources."

If powdered [infant formula](#) is used supplies should include a large cooking pot to sterilise equipment in boiling water, a kettle, detergent,

paper towels, a feeding cup (which is easier to clean than a bottle), a small gas stove with fuel, matches, a metal knife and tongs, a measuring container, a storage container and sufficient clean water as well as the infant formula and nappies and wipes.

"We found approximately three litres of clean water is required for each feeding - enough for reconstituting the formula, washing hands and sterilising and cleaning equipment. This adds up to 24 litres for the average eight feeds per day or 170 litres for a week - a significant demand in an emergency environment," says Dr Gribble

If liquid, ready-to-use infant formula is used in an emergency kit, the study found the requirement for water is roughly halved but the kits still require, detergent, a knife, paper towels, antiseptic wipes, disposable feeding bottles and teats or cups, zip lock bags, a sharp knife, a storage container and ready to use infant formula, nappies and nappy wipes.

"Whilst using ready-to-use infant formula and disposable bottles or feeding cups reduces the amount of supplies necessary and makes the process of actually feeding an infant in emergency conditions simpler, the cost of a large number of single serves of infant formula makes it an expensive option which may be difficult for families to afford," says Dr Gribble.

Even where caregivers have all of these supplies, actually feeding an infant in an emergency situation is still difficult and time consuming.

"If essential services are likely to be unavailable for more than a few days evacuation of formula-fed infants and their carers should be considered," she says.

Dr Gribble says emergency management authorities should encourage communities to support breastfeeding mothers and in areas with seasonal

emergencies urge mothers to delay stopping breastfeeding until after the emergency season.

"The greater the proportion of infants exclusively [breastfed](#) when an [emergency](#) occurs the more resilient the community is and the easier it will be to provide effective aid to the caregivers of formula-fed [infants](#). [Emergency preparedness](#) is the key to protecting the most vulnerable in any disaster."

More information: A full copy of "Emergency preparedness for those who care for infants in developed country contexts" published in the International Breastfeeding Journal can be downloaded here:
www.internationalbreastfeeding...tent/6/1/16/abstract

Provided by University of Western Sydney

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