




BREASTFEEDING FOR THE APOCALYPSE

The need for more effective policies
for infant feeding during emergencies

By Roberta Staley

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To say that Lourdes Santaballa of Puerto Rico was lucky is an understatement. When Hurricane Maria hit the Caribbean archipelago on September 20, Santaballa, single mom to an 11-year-old daughter and nine-year-old son, was hunkered down at home with stores of food and water in her concrete house, west of the capital of San Juan. Santaballa's former mother-in-law was also sheltering with the family. Together, they waited for the hammer to fall.

And fall it did. For 30 hours, Hurricane Maria, nearly a Category 5 storm, severely damaged or destroyed roadways, bridges and residences and left citizens without power or clean running water. At Santaballa's home, a huge mahogany tree, which stood in a park

directly opposite, was uprooted and catapulted by the tempest almost to the front door. It was a blessing in disguise. The tree's vast green crown blocked the 250 km/h winds. "There was water and mud in my foyer but the glass windows weren't broken," Santaballa says.

Others, specifically Santaballa's clients, weren't as fortunate. Santaballa is a doula, a term used to describe someone who supports women during birth. She is also an International Board Certified Lactation Consultant, as well as the founder of Alimentación Segura Infantil (Safe Feeding for Children).

Not surprisingly, breastfeeding support systems were in shambles. Lactation counselling for new mothers – both in hospital and out – had been curtailed. As soon as she was able, Santaballa ventured out of her home, enduring long line-ups for rationed gas to ensure she could drive to places where she might be needed. The tales of misery were gut-wrenching. Many were without shelter and food, and potable water stores were rapidly diminishing in the American territory of 3.4 million. (Oxfam condemned the U.S. government's response

as "slow and inadequate.") Mothers who hadn't been breastfeeding were running out of infant formula, says Santaballa. "You'd hear these desperate pleas from women, 'I need milk for my baby.'" Breastfeeding rates in Puerto Rico are among the lowest in the United States, she adds.

Babies had been born just before, during and after the hurricane. During early postpartum stages, breastfeeding can be challenging, with babies failing to "latch on." Mothers under stress sometimes find that their milk flow slows, causing many to believe their breast milk has dried up. Normally, lactation consultants step in to attempt to alleviate problems like these. Without such services, women turned to volunteer help at shelters. If infant formula supplies were available, the moms were incorrectly encouraged to switch to a milk substitute. "The shelter staff weren't trained," explains Santaballa.

Santaballa was hit with an idea. Why not introduce an emergency training program to support lactation, dubbing it "breastfeeding for the apocalypse." This included the prompt



JODINE CHASE

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A photo of Sarah Heagy and Malcolm fleeing Fort McMurray, Alberta, on the morning of May 4, 2016. It took her two days to fully evacuate with her baby and two year old.

training of 15-person groups in Puerto Rico's most vulnerable neighbourhoods who would act as the local go-to consultants for mothers with infants. Tutored to follow the humanitarian organization Action Against Hunger's Infant and Young Child Feeding in Emergencies (IYCF-E) guide, the groups advocated for "lactation as the best line of defence." If the mother had stopped nursing, there were measures to initiate relactation to re-establish breastfeeding.

Alternatively, a wet nurse could be sought. Since a wet nurse may not be able to feed another infant directly, Santaballa taught milk expression by hand into a sterile container. (Breast pumps, most which are electric, weren't usable.) Perhaps surprisingly, babies can be fed human milk or formula using disposable Dixie cups that are simply thrown away after use to prevent contamination.

"Babies are smarter than we think," says Santaballa. "You put them at an 80- to 85-degree angle, put the cup to their mouth and they lap it up like a cat. As they get bigger they will grab the cup and help feed themselves." Finally, if boiling bottles and nipples isn't possible, sterility can be achieved by soaking items for two minutes in a solution of four litres of water to 15 millilitres of Clorox bleach.

Santaballa also had recommendations for international donors. "You want to help babies

in emergencies? Send Dixie cups. Don't send breast pumps. Send single-use, ready-to-feed bottles of infant formula. Send humanitarian aid to organizations so they can send lactation consultants to communities. Don't send infant powdered milk."

Babies are especially vulnerable in emergencies because their immune systems don't develop for several months; they must rely upon the antibodies in mother's milk to ward off disease, says David Clark, an infant nutrition specialist and legal adviser for UNICEF in New York. This is borne out by statistics. In 2016, the World Health Organization (WHO) and UNICEF, based upon a study in *The Lancet*, estimated that 800,000 child deaths a year worldwide could be prevented by breastfeeding. Contaminated water, as well as a lack of breastfeeding overall, which increases the infant mortality even where there is access to clean water, are behind the grim statistics.

In Puerto Rico, mothers who weren't breastfeeding before the hurricane were using infant formula that was either powdered, which isn't sterile, or concentrated liquid formula. Water must be added to both. (Ready-to-feed infant

formula, which is fed unadulterated, is the most expensive of all three types of breast milk substitutes and thus is rarely available as an emergency provision, Santaballa says.) Mothers were forced to mix formula with water that was polluted due to the failure of water purification systems.

Water became contaminated with the deadly bacterium leptospirosis, believed to be spread by rats. This sparked an official boiling alert: it was imperative that the water added to powdered or concentrated infant formula be boiled first and bottles and nipples sterilized. But boiling could only be undertaken if the tiny camp stoves Puerto Ricans bought pre-hurricane hadn't run out of fuel, or if people hadn't run out of gasoline for their home generators, which were breaking down due to overuse, says Santaballa.

If infants succumbed due to the horrific living conditions that Puerto Ricans endured for months after Hurricane Maria, it was impossible to directly link the deaths to the use of powdered or concentrated milk, Santaballa says. "If a baby dies from a bacterial infection from powdered milk, the official cause of death

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HIRUT MELAKU

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An increase in climate change-related extreme weather events has highlighted the need for more effective policies for infant feeding during emergencies.

is sudden infant death syndrome (SIDS), gastroenteritis, a respiratory infection or another cause. It's not related to the hurricane and infant feeding, even though we know differently."

Some may assume that such chaos is isolated to disasters on small islands or the developing world, where social safety nets are precarious or nonexistent. However, other environmental catastrophes – last year's Hurricane Harvey in Texas, Hurricane Irma in Florida, British Columbia's raging forest fires, the evacuation of Fort McMurray, Alberta, due to wildfire in 2016 and Calgary's catastrophic flooding in 2013 – show that the First World is as vulnerable as poorer nations when it comes to cataclysms. Meanwhile, humanitarian emergencies, sparked by social and political upheaval, also put vast numbers of people into crisis. In all of these situations, infants and small children are most at risk. In a world that is facing increasing numbers of extreme, climate change-linked weather events, one of the best readiness measures that can be undertaken is the encouragement of breastfeeding, says UNICEF's Clark. "The bottom line is: breastfeeding saves lives."

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Breastfeeding may save lives in emergencies, but Western governments have yet to put into policy or even figure out how best to support mothers and babies when fire, flood, tempests or earthquakes rent the social fabric, says Edmonton's Jodine Chase, a communications consultant who provides crisis support to breastfeeding organizations, and a co-founder of SafelyFed Canada, which develops policy to ensure safe infant feeding in emergencies.

In the developed world, "there isn't a single country that has, as part of its emergency planning and preparedness, adopted standard guidance to support safe infant feeding," says Chase, who is a researcher in an ongoing Canadian Red Cross-funded project in Fort McMurray implementing training for infant and young child feeding practices in emergencies, based upon the experiences of families forced to evacuate the northern Alberta city on May 3, 2016.

Public health nurse and breastfeeding advocate Lucie Lapierre vividly recalls that terrifying day. Lapierre was vaccinating children at Fort McMurray Public Health when a raging

forest fire unexpectedly jumped the Athabasca River, which had till then acted like a moat to the city. The citizenry fled.

At the time, Lapierre's three-year-old son Antoine and one-year-old daughter Elizabeth were in day care. Elizabeth was still being breastfed in the evenings and morning. With time of the essence, Lapierre's husband Francois buckled the children into his car to join the bumper-to-bumper exodus heading south on Highway 63. Lapierre lagged behind to see if she could help a colleague evacuate hospital patients. There was nothing Lapierre could do, so she joined the highway convoy in her own vehicle. By now the fire had leapt the road, creating a drive-through tunnel of flames. "It looked like hell," recalls Lapierre, who now lives in Sarnia, Ontario.

Later that night, the family reunited in Lac la Biche, 300 kilometres south. The next day, they registered with the Red Cross with thousands of others at the local community centre. Lapierre noted the lack of privacy for breastfeeding; one mom nursed in the public toilets. Lapierre herself encountered problems. Her milk flow was affected by stress, even though, as a lactation expert, she knew the remedial measures needed to rectify the problem. Other moms would have experienced the same problem, says Lapierre, which highlights the need

for an emergency number to connect evacuees with lactation consultants. Lapierre also noted a large amount of out-of-date and even open containers of formula on hand that had been donated and was being offered to mothers. Yet there were no facilities for boiling water.

Being based in Edmonton, Chase was near the frontlines of the Fort McMurray fire. She organized a group of lactation counsellors who went to the Edmonton Expo Centre where thousands of evacuees had descended. Chase was dismayed at the pallets of donated powdered milk, as well as a dearth of private areas to nurse. Some moms, who had given birth in Fort McMurray only in the past day or two, were struggling to initiate breastfeeding. There was nowhere to boil water to sterilize feeding equipment. Meanwhile, viral gastroenteritis was sweeping the facility. The haphazardness of the situation, says Chase, highlights the lack of emergency preparedness and the danger it poses for infant and child health.

Social emergencies can pose just as much danger for infants. Last year, Canada was flooded with asylum seekers – 32,000 by the end of September – after the United States announced it was considering withdrawing the “temporary


protected status” given Haitian refugees following the country’s massive 2010 earthquake. (The Trump administration announced last November a permanent phaseout of this status by July 2019.) Most entered Québec and were housed temporarily in Montréal’s Olympic Stadium. The pregnant women were predominantly sent to YMCAs in Montréal, then transferred to hospital when labour began. Hirut Melaku, a doula and International Board Certified Lactation Consultant, decided to check to see how the moms were doing.

She was shocked. The women and their new babies who returned to the YMCA bore boxes of infant formula given to them by the hospital. However, there were no facilities for sterilizing. “I asked one mother how she was cleaning the bottles and she pointed to a bucket in the bathroom,” Melaku says. “For me, it’s appalling. There is no way that should be allowed in Canada,” says Melaku, who organized a new group called the Black Birth Workers and Lactation Consultants to provide proper breastfeeding support

to the new moms.

UNICEF’s Clark condemns the hospital practice of giving formula to new mothers. “The practice of giving free formula prevents the early initiation of breastfeeding. Companies will often provide as much formula as hospitals want,

knowing that it is easier for medical staff to provide formula to a mother rather than provide the support mothers need to initiate breastfeeding,” he says. There are, unquestionably, times when formula feeding is needed or desired by the mother, but the argument from Clark and others is that it should be an informed choice.

Extreme weather events are here to stay and are likely to worsen as the manifestations of climate change – rising sea levels, torrential rainstorms, hurricanes and dramatic temperatures – grip the planet. It is imperative that, in the face of such potential calamities, governments at all levels implement effective emergency protocols that take into account the most vulnerable, especially families with babies whose very survival is dependent upon access to safe feeding. 

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