Breastfeeding saves lives: emergency case studies

“In most places in the world, artificial feeding is not about pink teddies on tins and fathers making night feeds in soft lighting to the sound of gently sleeping mothers, but about rusty tins, failed supplies, maggoty bottles and sick or dead babies”.

—Marie McGrath, email June, 2009 Co-Director, Emergency Nutrition Network

Imagine having no clean water, no fuel, no money, no home and no secure supply of food. This is what mothers may face when a disaster strikes. When a mother faces a situation that threatens her life and that of her infant, her breasts are the only secure and safe source of nourishment for her baby.

What is an emergency?

An emergency is an extraordinary situation that can be caused by natural disasters or be political in origin. Some examples of the former are hurricanes, floods, mudslides, earthquakes, and epidemics, while political emergencies can be the result of war, displacement, civil strife, government failure, or extreme poverty. Any of these situations can put the health and survival of mothers, children and families at risk. Emergencies can mean turmoil, insecurity, poor sanitation, the lack of clean water, food, fuel, medical care, shelter and loss of life for those trapped in its midst. Those caught in an emergency may experience hardships never experienced before, in contexts where they had previously known stability and access to life sustaining resources. Alternatively, an emergency may intensify conditions for those already stressed by poverty and lack of social supports, and who have limited capacity and resources to cope.

Disasters can happen anywhere

New Orleans, United States 2005: Hurricane Katrina

When Hurricane Katrina struck on August 29, 2005, it was estimated that about 75,000 mothers with infants and 56,000 pregnant women were affected. They faced disruptions in the supply of clean water, inadequate access to safe food, exposure to environmental toxins, inadequate public health and clinical care, displacement from their homes and poor conditions in crowded shelters.

Families in the affected areas were already at greater risk for not breastfeeding or for short breastfeeding duration compared with the national average. The Centers for Disease Control and Prevention reported in 2004 that 51.3 per cent of infants in the region were “ever breastfed” compared to the national average of 70.3 per cent and only 7 per cent breastfed to 12 months compared to the US national average of 17.8 per cent. As well the area was known to be at greater risk for adverse pregnancy outcomes and low-birth weight infants than the general US population. At 9.4 per 1,000 live births, the infant mortality rate was well above the national average of 7.0.

With low breastfeeding rates, very limited access to clean water, electrical outages and lack of refrigeration,
mothers caught in the disaster were faced with hungry crying infants as feeding became a difficult problem. Single-serving feeding bottles needed to be brought in with ready-to-serve feeds. Increased risk of infection and diarrhoeal disease, as well as a lack of secure supplies became major problems.

It was reported that two or three infants died of dehydration inside the New Orleans convention centre\(^1\), and the infant mortality rate in Mississippi jumped from 9.7 per 1000 live births to 11.8 from 2004 to 2005, a rise of 18 per cent in just one year.\(^2\) The Mississippi Department of Health said that the spike in infant mortality rates might be partially attributed to infants who died as a result of Hurricane Katrina.

It is impossible to know how many infants died from not breastfeeding during the disaster. But it is known that response teams did not focus on providing breastfeeding support. Most mothers received no breastfeeding support.

**Oregon wilderness, United States 2006: snow disaster**

During December of 2006, the Kim family got stuck in a snow storm while driving through the remote mountains of Oregon. James Kim, the father, left his spouse Kati and their two children—aged 4 years and 7 months—behind in their vehicle in order to find help. Miraculously, Kati was able to keep her two children alive for 11 days by breastfeeding them both. Breastmilk kept her children nourished while the closeness of holding them provided body warmth. Unfortunately, James never did find help and died of hypothermia trying to find aid for his family.

“Lucky for these children that mom was breast-feeding,” says Kathy McCoy, a lactation consultant at Clarian Health Partners Methodist Hospital in Indianapolis. “No one ever expects disaster to happen, but when it does, breast milk is truly a lifesaver.”

**Java, Indonesia 2006: earthquake**

On May 27, 2006, an earthquake shook Central Java taking about 6,000 lives and injuring 40,000 - 60,000 more. Around the same time, volcanic activity in the region increased dramatically, prompting the evacuation of tens of thousands of people. Hundreds of thousands lost their homes and livelihoods.

Although nearly all Indonesian women initiate breastfeeding, only 17.8 per cent of them do so exclusively at four to five months of age.\(^3\) The promotion of artificial feeding is common in Indonesia and formula feeding is widespread.

Emergency responses to the earthquake were rapid, involving UN agencies, non-governmental organisations and Indonesian and foreign military personnel. Very quickly, supplies of food and drink started flowing into the affected region. Supplies included large quantities of infant formula, powdered milk, and various commercial complementary foods. Contrary to key international recommendations on the use and

### Table 2: Breastfeeding saves lives

<table>
<thead>
<tr>
<th>Preventive intervention</th>
<th>Estimated under-fives deaths prevented* (thousands)</th>
<th>Estimated under-fives deaths prevented* (% of all deaths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding</td>
<td>1,301</td>
<td>13</td>
</tr>
<tr>
<td>Insecticide-treated materials</td>
<td>691</td>
<td>7</td>
</tr>
<tr>
<td>Complementary feeding</td>
<td>587</td>
<td>6</td>
</tr>
<tr>
<td>H. influenzae type b vaccination</td>
<td>403</td>
<td>4</td>
</tr>
<tr>
<td>Zinc supplementation</td>
<td>351</td>
<td>4</td>
</tr>
<tr>
<td>Clean water, sanitation, hygiene</td>
<td>326</td>
<td>3</td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
<td>176</td>
<td>2</td>
</tr>
<tr>
<td>Tetanus toxoid vaccination</td>
<td>161</td>
<td>2</td>
</tr>
</tbody>
</table>

distribution of breastmilk substitutes, aid agencies were quick to distribute these to parents of infants and young children. Aid workers had a strong perception that since artificial feeding was already common the distribution of feeding products was merely maintaining the status quo.

Within a week of the disaster, breastmilk substitutes had been distributed to almost every affected household. UNICEF data showed that 80 per cent of children under the age of two years had received infant formula. The massive donations resulted in a substantive increase in the use of infant formula. Prior to the disaster 32 per cent of children under the age of 6 months old had ever consumed infant formula, as compared to at least 43 per cent during the emergency response.

The result was a significant increase in the prevalence of diarrhoea. Post-earthquake incidence of diarrhoea was 29 per cent compared to 1-7 per cent prior to the earthquake. Diarrhoea prevalence was double amongst those who received donations of infant formula (25.4 per cent) as compared to those who did not (11.5 per cent). This rise was attributed to changing feeding practices and artificial feeding in conditions of poor sanitation and hygiene following the disaster. This case provides a strong indictment of the widespread distribution of infant formula during emergencies. Furthermore, it underscores the importance of following international recommendations to promote and support breastfeeding at all times.3

References

Be prepared!

- Children are the most vulnerable in emergencies – child mortality can soar from two to 70 times higher than average due to diarrhoea, respiratory illness and malnutrition.
- Breastfeeding is a life-saving intervention and protection is greatest for the youngest infants. Even in non-emergency settings, non-breastfed babies under two months of age are six times more likely to die.
- Emergencies can happen anywhere in the world. Emergencies destroy what is ‘normal,’ leaving caregivers struggling to cope and infants vulnerable to disease and death.
- During emergencies, mothers need active support to continue or re-establish breastfeeding.
- Emergency preparedness is vital. Supporting breastfeeding in non-emergency settings will strengthen mothers’ capacity to cope in an emergency.