Watering Their Graves: Breast Milk Substitutes and Supplements in Developing Countries

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Jamie Oyugi*

In a 1978 congressional hearing on global formula marketing practices, Senator Ted Kennedy interrogated a Nestlé representative, resulting in the following heated exchange:

TK: “Would you agree with me that your product should not be used where there is, uh, impure water? Yes or no.”

Nestlé: “Uh, we keep all the instructions—”

TK: “Just, just answer. What would you—?”

Nestlé: “Of course not…”?

TK: “Well, as I understand what you say is that where there is impure water it should not be used.”

Nestlé: “Yes.”

TK: “Where the people are so poor that they’re not going to realistically be able to continue to purchase it, which is going to mean that they’re going to dilute it to a point which is going to endanger the health, then it should not be used.”

Nestlé: “Yes.”

TK: “Well, now, then my final question is what do you do, or what do you feel is your corporate responsibility to find out the extent of the use of your product in those circumstances in the developing part of the world? Do you feel that you have any responsibility?” (Prudall 2009)

While lacking safe drinking water affects entire communities, it can devastate babies. Mixing baby formula using tainted water can cause infant death and sickness. This devastation is most famously and horrifically seen through the events leading up to creation of the World Health Organization’s International Code of Marketing of Breast-milk Substitutes in 1981, which soundly repudiated all formula marketing and would be adopted as law (in whole or in part) in over eighty countries (UNICEF 2011). Infant deaths around the world were blamed on a combination of using tainted water to mix formula and aggressive and deceptive marketing tactics by formula companies such as Nestlé that interfered with breastfeeding. Activism efforts included an ongoing worldwide boycott of Nestlé products, fueled by widely viewed images from the developing world that depicted Nestlé formula cans erected by parents on their babies graves (Palmer 2011). Among the marketing practices employed by these companies were milk nurses, under cover nurse-salespersons in white uniforms who sold formula companies’ products directly to mothers in the maternity wards. Many mothers incorrectly believed that these nurses acted as employees of the hospital. Lured by these nurses and by the apparent superiority of milks produced by Western scientists, mothers readily fed their babies formula (Palmer 2011).*

These marketing practices were not only deceptive, but damaging to babies’ health. The World Health Organization recommends exclusive breastfeeding for the first six months and continued breastfeeding up to two years of age and beyond. Exclusive breastfeeding means breastfeeding without any supplements such as formula, water, special infant teas, or solid foods. Babies who are not exclusively breastfed for the first six months face higher rates of illness and allergies, even under the best of circumstances. One reason for this is that, until the middle of the first year of life, gaps exist between the cells of the small intestine that allow pathogens and food proteins to slip directly into the bloodstream. Young babies who drink impure water not only face increased exposure to disease because of their vulnerability as infants with naturally underdeveloped immune systems, but also because they lack the protection of exclusive breastfeeding (Bonyata 2011; Rautava and Walker 2009).

Although it is common in many countries for women to breastfeed their babies well past the first year, it is far less common to breastfeed exclusively for the first six months. UNICEF tracks breastfeeding rates for 128 countries (UNICEF 2009). In only 38 of these countries are 50% or more babies exclusively breastfed for four months, which is still two months short of the WHO recommendation. The following chart summarizes UNICEF’s global statistics:

The data show that while mothers in the least developed countries are continuing to breastfeed for longer than mothers elsewhere, they exclusively breastfeed less than the general population.

**TABLE 1**

<table>
<thead>
<tr>
<th></th>
<th>Exclusively breastfed 4 mos.</th>
<th>Breastfeeding beyond 1 yr.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>World</strong></td>
<td>51%</td>
<td>76%</td>
</tr>
<tr>
<td><strong>Developing Countries</strong></td>
<td>51%</td>
<td>77%</td>
</tr>
<tr>
<td><strong>Least Developed Countries</strong></td>
<td>47%</td>
<td>91%</td>
</tr>
</tbody>
</table>

This trend is dramatically more pronounced when one examines the data for the countries with the least access to clean water (WHO / UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation 2010). Table 2 provides the breastfeeding rates for all African countries in which less than 50% of the population has access to an improved source of drinking water.

With the exception of Madagascar, the exclusive breastfeeding rates in Table 2 are less than half the exclusive breastfeeding rates for the least developed countries in Table 1. In other words, the communities with the most impure water also have the highest rates of supplementation. The implications for infant health are staggering. Not all infants who are receiving supplements are drinking impure water; some may be drinking water or formula

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made with water from safe sources, others boiled water, and still others may be drinking cow milk or other milks. But where other children and adults are drinking impure water, and where a family is too poor to own cows or goats (or where an ethnic group does not rear cows or goats), surely these infants are ingesting impure drinking water.

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Exclusive 4 mos.</th>
<th>Exclusive 6 mos.</th>
<th>Beyond 1 yr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chad</td>
<td>2%</td>
<td>2%</td>
<td>92%</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>11%</td>
<td>8%</td>
<td>87%</td>
</tr>
<tr>
<td>Somalia</td>
<td>13%</td>
<td>9%</td>
<td>50%a</td>
</tr>
<tr>
<td>Angola</td>
<td>14%</td>
<td>11%</td>
<td>89%</td>
</tr>
<tr>
<td>Mauritania</td>
<td>16%</td>
<td>17%</td>
<td>85%</td>
</tr>
<tr>
<td>Kenya</td>
<td>18%</td>
<td>13%</td>
<td>92%</td>
</tr>
<tr>
<td>DRC</td>
<td>22%</td>
<td>17%</td>
<td>90%</td>
</tr>
<tr>
<td>Niger</td>
<td>22%</td>
<td>17%</td>
<td>90%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>38%</td>
<td>30%</td>
<td>94%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>77%</td>
<td>67%</td>
<td>91%</td>
</tr>
</tbody>
</table>

As Senator Kennedy noted, "where there is impure water [supplements] should not be used." Many factors lead mothers without access to safe drinking water to supplement breast-milk including formula marketing, misinformation from health care providers, and cultural norms. One possible factor, difficulty with breastfeeding, is seemingly eliminated by the fact that the vast majority of these mothers continue to breastfeed beyond the first year. Because mothers in developing countries live in societies rich in breastfeeding women, they have ample resources for breastfeeding encouragement and troubleshooting. Seemingly what they lack is information about the importance of exclusive breastfeeding for the first six months. Because countries with the least safe water have the lowest exclusive breastfeeding rates, information about the importance of exclusive breastfeeding must play a central role in programs seeking to ameliorate the impact of impure water. Even malnourished mothers (apart from the most extreme cases) can almost always breastfeed. Providing mothers with accurate breastfeeding information is a low cost strategy that could go a long way to protect a community's most vulnerable members as other water issues are addressed.

1 For a similar modern practice, consider the complementary gift bags of formula that most U.S. hospitals distribute to new mothers. Eight studies have shown that mothers who receive such bags are more likely either to stop breastfeeding or to supplement with formula (Bergevin, Doucherty and Kramer 1983; Donnelly, et al. 2000; Frank, et al. 1987; Dundy, et al. 1992; Perez-Escamilla, et al. 1994; Caulfield, et al. 1998; Romero-Gwynn 1989).

2 Each of these alternatives poses health risks of its own.

3 As for HIV positive mothers, recent research has shown that women receiving certain antiretroviral drugs interventions can substantially reduce the risk of transmitting the virus through breast milk to 1-2%.

4 Where antiretroviral drugs are unavailable, the World Health Organization nonetheless recommends, "mothers should be counselled [sic] to exclusively breastfeed in the first six months of life and continue breastfeeding thereafter unless environmental and social circumstances are safe for, and supportive of, [formula] feeding" (World Health Organization 2010).

Works Cited


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