SUDAN

The Costs of Undernutrition

- Over one-third of child deaths are due to undernutrition, mostly from increased severity of disease.²
- Children who are undernourished between conception and age two are at high risk for impaired cognitive development, which adversely affects the country’s productivity and growth.
- The economic costs of undernutrition include direct costs such as the increased burden on the health care system, and indirect costs of lost productivity.
- Childhood anemia alone is associated with a 2.5% drop in adult wages.³

Where Does Sudan Stand?

- 40% of children under the age of five are stunted, 27% are underweight, and 16% are wasted.²
- One-third of infants are born with a low birth weight.²

Most of the irreversible damage due to malnutrition in Sudan happens during gestation and in the first 24 months of life.⁴

As shown in Figure 1, malnutrition rates have not improved at all over the past two decades. Sudan will not meet MDG 1c (halving 1990 rates of child underweight by 2015) with business as usual.⁴

Vitamin and Mineral Deficiencies Cause Hidden Hunger

Although they may not be visible to the naked eye, vitamin and mineral deficiencies impact wellbeing and are pervasive in Sudan, as indicated in Figure 4.
Solutions to Primary Causes of Undernutrition

Poor Infant Feeding Practices
- Just 1 in 3 infants under six months are exclusively breastfed.2
- During the important transition period to a mix of breast milk and solid foods between six and nine months of age, about one-half of infants are not fed appropriately with both breast milk and other foods.2

Solution: Support women and their families to practice optimal breastfeeding and ensure timely and adequate complementary feeding. Breast milk fulfills all nutritional needs of infants up to six months of age, boosts their immunity, and reduces exposure to infections. In high HIV settings, follow WHO 2009 HIV and infant feeding revised principles and recommendations.9

High Disease Burden
- 28% of deaths of children under 5 are due to pneumonia or diarrhea.4
- Undernutrition increases the likelihood of falling sick and severity of disease.
- Undernourished children who fall sick are much more likely to die from illness than well-nourished children.
- Parasitic infestation diverts nutrients from the body and can cause blood loss and anemia.

Solution: Prevent and treat childhood infection and other disease. Hand-washing, deworming, zinc supplements during and after diarrhea, and continued feeding during illness are important.

Limited Access to Nutritious Food
- 1 in 5 households is food insecure.5
- Achieving food security means ensuring quality and continuity of food access, in addition to quantity, for all household members.
- Dietary diversity is essential for food security.

Solution: Involve multiple sectors including agriculture, education, transport, gender, the food industry, health and other sectors, to ensure that diverse, nutritious diets are available and accessible to all household members.

References

FIGURE 3 Undernutrition Affects All Wealth Quintiles – Poor Infant Feeding Practices and Disease are Major Causes

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>Stunting Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richest</td>
<td>28</td>
</tr>
<tr>
<td>Fourth</td>
<td>39</td>
</tr>
<tr>
<td>Middle</td>
<td>44</td>
</tr>
<tr>
<td>Second</td>
<td>45</td>
</tr>
<tr>
<td>Poorest</td>
<td>39</td>
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</tbody>
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Source: Other Nutritional Survey (figures based on the WHO Child Growth Standards).

FIGURE 4 High Rates of Vitamin A and Iron Deficiency Contribute to Lost Lives and Diminished Productivity

- Iron: Current rates of anemia among preschool aged children and pregnant women are extraordinarily high at 85% and 58%, respectively.6 Iron-folic acid supplementation of pregnant women, deworming, provision of multiple micronutrient supplements to infants and young children, and fortification of staple foods are effective strategies to improve the iron status of these vulnerable subgroups.
- Vitamin A: 28% of preschool aged children and 16% of pregnant women are deficient in vitamin A.7 Supplementation of young children and dietary diversification can eliminate this deficiency.
- Iodine: Only 11% of households consume iodized salt, and over 1 million infants remain unprotected from iodine deficiency disorders.4
- Adequate intake of micronutrients, particularly iron, vitamin A, iodine and zinc, from conception to age 24 months is critical for child growth and mental development.

World Bank Nutrition-Related Activities in Sudan

Projects: The World Bank is currently overseeing two health system development operations —financed by the Multi-Donor Trust Fund for Sudan—with important interventions designed to improve child health and reduced mortality rates. In the first phase, this project was supported with US$60 million; another US$63 million was recently approved for phase two to focus on the provision of a basic package of health service with emphasis on maternal and child health. In addition, several reports have been completed in past years including two health sector reviews and a how-to-guidance on improving dialogue in areas including child and maternal health.