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.5

Where Does Zambia Stand?

- 45% of children under the age of five are stunted and 15% are underweight, and 5% are wasted.2
- Malnutrition rates in Zambia have remained virtually unchanged since the early 1990s, and with business as usual, Zambia will not meet MDG 1c (halving child underweight by 2015).6
- 12% of infants are born with a low birth weight.2
- Zambia has achieved high rates of vitamin A supplementation: 96% of children 6–59 months of age receive the recommended two doses of vitamin A approximately six month apart.7 This intervention helps to decrease vitamin A deficiency and childhood mortality.
- The percentage of children with low urinary iodine levels has been on the decline, which may be attributed to a enforcement of universal salt iodization legislation passed in 1978 and reinforced since 1996.7

As seen in Figure 1, Zambia displays significantly higher prevalence of child stunting than other African nations with similar or lower per capita income, including Kenya and Mauritania. This shows that it is possible to achieve better nutrition outcomes despite low income.

Undernutrition is not just a problem of poverty. As Figure 2 shows, almost 30% of the children even in the wealthiest quintile are stunted. This is not an issue of food access, but of caring practices and disease.

Vitamin and Mineral Deficiencies Cause Hidden Hunger

Although they may not be visible to the naked eye, micronutrient deficiencies impact well-being and are widespread in Zambia, as shown in Figure 3.
- **Vitamin A**: 54% of preschool aged children and 14% of pregnant women are deficient in vitamin A.9 The rate among preschool children is lower than it would have been without coverage of vitamin A supplementation campaigns, but dietary diversification is needed to further reduce vitamin A deficiency.
- **Iron**: About half of preschool aged children and pregnant women are anemic.10 Iron-folic acid supplementation of pregnant women, deworm-
Poor Infant Feeding Practices
• 43% of all newborns do not receive breast milk within one hour of birth.\(^2\)
• 39% of infants under six months are not exclusively breastfed.\(^2\)

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.\(^12\)

High Disease Burden
• 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 including worms. Hand-washing, deworming, zinc supplements during and after diarrhea, and continued feeding during illness are important.

Limited Access to Nutritious Food
• Nearly half (45%) of households are food insecure as defined as per capita access to calories.\(^8\) Many more households likely lack access to diverse diets year round.
• Achieving food security means ensuring quality and continuity of food access, in addition to quantity, for all household members.
• High rates of hidden hunger indicate that dietary diversity may be low.

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

References

Therapeutic Care for Severe Acute Malnutrition (SAM)\(^3\) was implemented by Valid International between 2007–2009. The project established a system of treating severely malnourished children, and attained a cure rate of more than 97% in SAM-affected children.

The Bank also supported the “Scale up Nutrition: Activities in the Ministry of Health” project. The project focused on nutritional screening for children aged 6 to 59 months and dissemination of infant and young child feeding messages during 2009 Child Health Week. It was successful and was scaled up to other districts using Government resources and local support. Child Health Week is a biannual event held every year in June and November. It presents an opportunity to reach children under 5, with critical child survival services which has recently been expanded to include nutrition screening and referral. Building on lessons learned, these programs are going to be scaled up through inclusion in the next National Strategic Plan 2011–2015.

World Bank Nutrition Related Activities in Zambia
The Scaling Up Nutrition initiative is supporting the reinvigorated National Food and Nutrition Council in providing leadership in nutrition policy development and implementation. An initial activity is the design and implementation of a comprehensive situation analysis.

The World Bank Development Market Place-funded project “Provision of Community based