The Costs of Malnutrition

- The Latin America and Caribbean region is anticipated to lose a cumulative US$8 billion to chronic disease by 2015.  
- Over one-third of child deaths are due to undernutrition, mostly from increased severity of disease.  
- 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 and overweight 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.

Where Does Bolivia Stand?

- 27% of children under the age of five are stunted, 14% are underweight, and 3% are wasted.
- The prevalence of child overweight is now greater than the prevalence of child underweight in Bolivia.
- 68% of those aged 15 and above are overweight, of which 30% are obese.
- 15% of infants are born with a low birth weight.

As seen in Figure 1, stunting rates in Bolivia are similar to other countries in its region and income group. It has a level of stunting comparable to Haiti, despite having higher per capita income. Within the country, there is likely to be variation across geographies and socio-demographic groups.

Key Actions to Address Malnutrition:

- Improve infant and young child feeding through effective education and counseling services based on regular growth monitoring of children.
- Achieve effective iron and vitamin A supplementation to the poorest and most vulnerable populations (pregnant women and young children).
- Improve effective coverage and quality of basic health and nutrition services.
- Address the growing burden of overweight and obesity through policies that promote diverse diets and physical activity.

Most of the irreversible damage due to malnutrition in Bolivia happens between 6 and 20 months of life.

The Double Burden of Undernutrition and Overweight

Though Bolivia is currently on track to meet MDG 1c (halving 1990 rates of child underweight by 2015) it has seen a recent increase in child obesity. Low-birth weight infants and stunted children may be at greater risk of chronic diseases such as diabetes and heart disease than children who start out well-nourished. Between 1994 and 1998 the number of overweight women increased nine percentage points, with the greatest increases seen among women with less education.

This “double burden” is the result of various factors. Progress in improving community infrastructure and development of sound public health systems has been slow, thwarting efforts to reduce undernutrition; while rapid urbanization and the adoption of Western diets high in refined carbohydrates, saturated fats and sugars, combined with a more sedentary lifestyle are commonly cited as the major contributors to the increase in overweight and chronic diseases.

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Country Context

| HDI ranking: 113th out of 182 countries |
| Life expectancy: 66 years |
| Lifetime risk of maternal death: 1 in 89 |
| Under-five mortality rate: 54 per 1,000 live births |
| Global ranking of stunting prevalence: 78th highest out of 136 countries |

Technical Notes

Stunting is low height for age.

Underweight is low weight for age.

Wasting is low weight for height.

Current stunting, underweight, and wasting estimates are based on comparison of the most recent survey data with the WHO Child Growth Standards, released in 2006.

Low birth weight is a birth weight less than 2500g.

Overweight is a body mass index (kg/m²) of ≥ 25; obesity is a BMI of ≥ 30.

The methodology for calculating nationwide costs of vitamin and mineral deficiencies, and interventions included in the cost of scaling up, can be found at: www.worldbank.org/nutrition/profiles

Source: Stunting rates were obtained from WHO Global Database on Child Growth and Malnutrition. GNI data were obtained from the World Bank’s World Development Indicators.

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Poor Infant Feeding Practices

- 39% of all newborns do not receive breast milk within one hour of birth.²
- 40% of infants under six months are not exclusively breastfed.²
- During the important transition period to a mix of breast milk and solid foods between six and nine months of age, 19% 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 to introduce adequate complementary foods when children are six months of age, while still breastfeeding.

High Disease Burden

- Undernourished children have an increased likelihood of falling sick and greater 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 stunting and prevent and treat childhood infection and disease through hand-washing, deworming, zinc supplements during and after diarrhea, and continued feeding. Promote adequate coverage of basic health and nutrition services, improving community outreach.

Limited Access to Nutritious Food

- 23% of households are food insecure.¹⁰
- Dietary diversity is essential for food security.
- Achieving a diverse and nutritious diet seems to be a problem reflected in high rates of anemia, overweight, and obesity.

Solution: Involve multiple sectors including education, health, agriculture, gender, the food industry, and other sectors, to ensure that diverse, nutritious diets are available and accessible to all household members. Examine food policies and the country regulatory system as they relate to overweight and obesity.

References


Vitamin and Mineral Deficiencies Cause Hidden Hunger

Although they may not be visible to the naked eye, vitamin and mineral deficiencies impact well-being in Bolivia, as indicated in Figure 2.

**Figure 2** High Rates of Vitamin A and Iron Deficiency Contribute to Lost Lives and Diminished Productivity

- **Vitamin A:** 22% of preschool aged children are deficient in vitamin A.¹⁴
- **Iron:** Current rates of anemia among preschool aged children and pregnant women are 52% and 37%, respectively.¹⁵ 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.
- 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 Bolivia

**Projects:** The World Bank is currently supporting the US$25 million Expanding Access to Reduce Health Inequities Project, the third phase of a series of operations geared towards reducing chronic malnutrition among children under two years of age; and promoting demand and access to maternal and infant health care services in areas with the most severe levels of food insecurity and highest undernutrition indicators. Through the Investment in Child and Youth Project the Bank is also supporting the implementation of the conditional cash transfer program (CCT) Bono Juana Azurduy, as well as the strengthening of the implementing agency Ministry of Health and Sports (MOH) to carry out, monitor and supervise the program.

**Analytic Work:** The Japan Trust Fund for Scaling-Up Nutrition is currently supporting the preparation of a video to help parents understand the negative impacts of undernutrition on their children and the need to demand quality services for the prevention of undernutrition.

**World Bank nutrition activities in Latin America:** www.worldbank.org/lacnutrition

**Addressing undernutrition is cost effective:** Costs of core micronutrient interventions are as low as US$0.05–8.46 per person annually. Returns on investment are as high as 6–30 times the costs.¹³