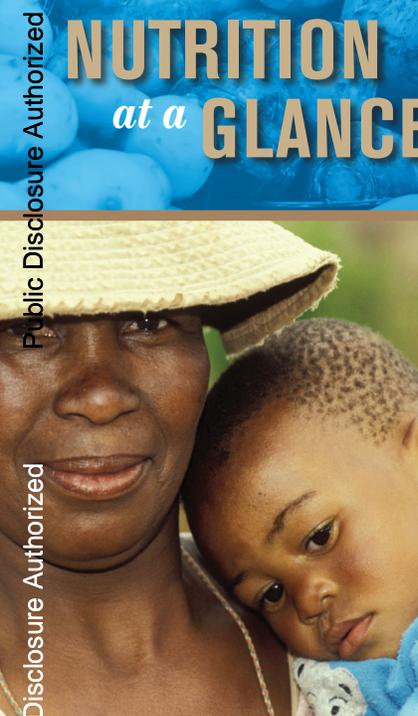




NUTRITION at a GLANCE

BOTSWANA



Country Context

HDI ranking: 125th out of 182 countries¹

Life expectancy at birth: 54 years²

Lifetime risk of maternal death: 1 in 130²

Under-five mortality rate: 31 per 1,000 live births²

Global ranking of stunting prevalence: 56th highest out of 136 countries²

Technical Notes

Stunting is low height for age (too short).

Underweight is low weight for age (too small).

Wasting is low weight for height (too thin).

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

The Costs of Malnutrition

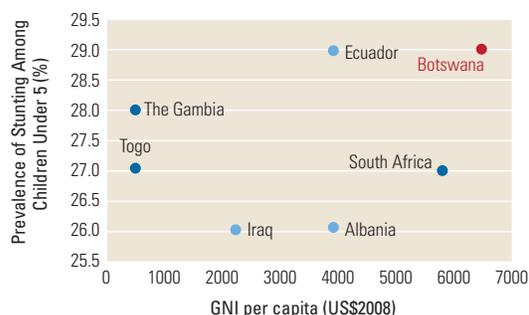
- Over one-third of child deaths are due to under-nutrition, mostly from increased severity of disease.²
- Children who are undernourished between conception and age two are at high risk for impaired cognitive development, which adversely affects the country's productivity and growth.
- The Africa region is anticipated to lose at least a cumulative US\$4.0 billion to chronic disease by 2015.⁵
- 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.⁶

Where Does Botswana Stand?

- 29% of children under the age of five are stunted, 11% are underweight, and 6% are wasted.²
- 48% of those aged 15 and above are overweight or obese.⁷
- 10% of infants are born with a low birth weight.²

As seen in **Figure 1**, Botswana has similar rates of stunting to other countries in its region with much lower national income. Countries with lower per capita incomes in other regions, such as Albania and Iraq exhibit reduced rates of child stunting. This demonstrates that stunting is not a function of income alone.

FIGURE 1 Botswana has Higher Rates of Stunting than Expected Given its National Income



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.

Annually, Botswana loses over US\$78 million in GDP to vitamin and mineral deficiencies.^{3,4} Scaling up core micronutrient nutrition interventions would cost less than US\$1 million per year.

(See *Technical Notes* for more information)

Key Actions to Address Malnutrition:

Increase nutrition capacity within the Ministries of Health and Agriculture.

Improve infant and young child feeding through effective education and counseling services.

Increase coverage of vitamin A supplementation for young children and deworming.

Achieve universal salt iodization.

Improve dietary diversity through promoting production of a diversity of foods and market and infrastructure development.

The Double Burden of Undernutrition and Overweight

Though Botswana is currently on track to meet MDG 1c (halving 1990 rates of child underweight by 2015)⁹ it has seen a recent increase in a different nutritional problem, adult obesity. The coexistence of undernutrition and overnutrition may lead to particular risks: 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.¹⁰

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

Most of the irreversible damage due to malnutrition happens during gestation and in the first 24 months of life⁹.

Poor Infant Feeding Practices

- Two thirds 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, 43% 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.¹⁵

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. Hand-washing, deworming, zinc supplements during and after diarrhea, and continued feeding during illness are important.

Limited Access to Nutritious Food

- 26% of households are food insecure, using a measure of 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.
- Dietary diversity is essential for food security.

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

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more sedentary lifestyle are commonly cited as the major contributors to the increase in overweight and chronic diseases.¹¹ Cultural factors, perceptions and beliefs about body weight may also play a significant role.

Vitamin and Mineral Deficiencies Cause Hidden Hunger

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

- **Vitamin A:** 26% of preschool aged children and 19% of pregnant women are deficient in vitamin A.¹² Supplementation for young children and dietary diversification can eliminate this deficiency.

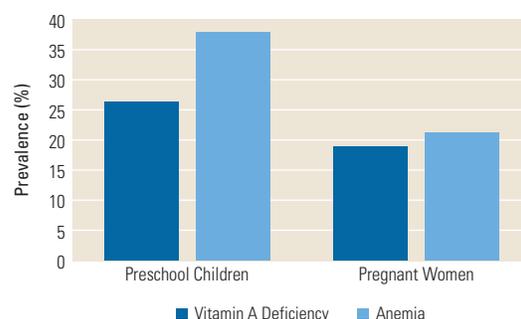
- **Iron:** Current rates of anemia among preschool aged children and pregnant women are 38% and 21%, respectively.¹³ Iron-folic acid supplementation of pregnant women, deworming, provision of multiple micronutrient supplements to infants and young children, and fortification of staple foods are effective strategies to improve the iron status of these vulnerable subgroups.
- **Iodine:** One third of households do not consume iodized salt,⁹ leaving children in those households unprotected from iodine deficiency disorders.
- 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 Botswana

The Japan Trust Fund for Scaling-Up Nutrition is expected to finance the development of recommendations and best practices for infant feeding practices in the context of high HIV/AIDs.

Addressing undernutrition is cost effective: Costs of core micronutrient interventions are as low as US\$ 0.05–3.60 per person annually. Returns on investment are as high as 8–30 times the costs.¹⁴

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



Source: 1995–2005 data from the WHO Global Database on Child Growth and Malnutrition.

