The Costs of Malnutrition

- 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 and overweight include direct costs such as the increased burden on the health care system, and indirect costs of lost productivity of adult workers.
- Undernourished children who experience rapid weight gain after infancy are at higher risk for chronic diseases such as diabetes and coronary heart disease.\(^1\)
- Childhood anemia alone is associated with a 2.5% drop in adult wages.\(^5\)

Where Does El Salvador Stand?

- 21% of children under the age of five are stunted, 6% are underweight, and 2% are wasted.\(^7\)
- 7% of infants are born with a low birth weight.\(^2\)
- 38% of children between 6–24 months are anemic.\(^17\)
- 6% of children are overweight which is equal to the prevalence of child underweight.\(^7\)
- 49% of adults are overweight or obese.\(^8\)

Disparities in Malnutrition within El Salvador

There are striking disparities in the rates of malnutrition between various subgroups in El Salvador.

FIGURE 1 El Salvador is in the Upper Tier for Stunting Rates When Compared to Countries with Similar Income Levels in the Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Prevalence of Stunting Among Children Under 5 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peru</td>
<td>35</td>
</tr>
<tr>
<td>Ecuador</td>
<td>30</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>25</td>
</tr>
<tr>
<td>Panama</td>
<td>20</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>15</td>
</tr>
<tr>
<td>Chile</td>
<td>5</td>
</tr>
<tr>
<td>Jamaica</td>
<td>10</td>
</tr>
<tr>
<td>Colombia</td>
<td>15</td>
</tr>
<tr>
<td>Uruguay</td>
<td>20</td>
</tr>
<tr>
<td>Brazil</td>
<td>25</td>
</tr>
<tr>
<td>Bolivia</td>
<td>30</td>
</tr>
<tr>
<td>Guatemala</td>
<td>35</td>
</tr>
<tr>
<td>El Salvador</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Stunting rates were obtained from the 2010 WHO World Health Statistics Report.\(^6\) GNI data were obtained from the World Bank’s World Development Indicators.\(^9\)

Children in rural areas are almost twice as likely to be stunted as children in urban areas (18% vs. 10%). Undernutrition is also linked to maternal education: almost 40% of children born to mothers with no education are stunted. Most notable is the correlation between child stunting and household income, as shown in Figure 2.\(^17\)

FIGURE 2 Children from the Lowest Income Quintile are Almost Seven Times More Stunted Than Children in the Richest Income Quintile

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Prevalence of Stunting Among Children Under 5 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First (Poorest)</td>
<td>35</td>
</tr>
<tr>
<td>Second</td>
<td>25</td>
</tr>
<tr>
<td>Third</td>
<td>15</td>
</tr>
<tr>
<td>Fourth</td>
<td>5</td>
</tr>
<tr>
<td>Fifth (richest)</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: FESAL, 2008.\(^9\)
Solutions to Primary Causes of Undernutrition

Poor Infant Feeding Practices
- 67% of newborns do not receive breast milk within one hour of birth.\(^9\)
- 69% of infants under six months of age are not exclusively breastfed.\(^9\)
- 24% of infants between six to nine months of age are not fed appropriately with breast milk and solid foods during this important transition period where both breastmilk and other nutritious foods are needed.

Solution: Support women and their families to learn and practice optimal breast feeding and introduce nutritious 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 experience greater severity of disease.
- Undernourished children who fall sick are much more likely to die from childhood illnesses than well-nourished children.
- Children who are undernourished in the first 2 years of life and who put on weight rapidly later in childhood and in adolescence are at high risk of chronic diseases related to nutrition.\(^9\)

Solution: Prevent and treat childhood stunting, overweight and diseases or infections. Promote healthy eating and physical activity.

Limited Access to Nutritious Foods
- Consuming a diverse and nutritious diet seems to be a challenge as reflected in the rates of stunting, anemia, and overweight.
- Dietary diversity is essential for healthy eating and food security.

Solution: Involve all sectors concerned with nutrition security including education, health, agriculture, food industry, and others, to ensure that diverse, nutritious diets are available and accessible to households of all income levels. Food policies and regulations should promote access to a variety of nutritious foods to prevent stunting, micronutrient deficiencies and obesity.

Vitamin and Mineral Deficiencies Cause Hidden Hunger
Although they may not be visible to the naked eye, micronutrient deficiencies are widespread in El Salvador, as shown in Figure 3.

- Iron: In the last 10 years, the prevalence of anemia has increased more than 20% and has almost doubled in rural areas. Current rates of anemia among preschool children and pregnant women are 27% and 21%,\(^9\) respectively. Iron-folic acid supplementation of pregnant women, deworming, multiple micronutrient supplementation of infants and young children, and fortification of staple foods are effective strategies to improve the iron status of these vulnerable groups.
- Vitamin A: 14% of preschool aged children are deficient in vitamin A.\(^9\)

The Double Burden of Undernutrition and Overweight
While undernutrition persists, El Salvador has seen an exponential increase in rates of overweight and obesity, notably amongst children and women. The prevalence of overweight among children under 5 has increased by 50% in the last 10 years.\(^9\) Furthermore, 80% of women over 40 years old are overweight.\(^9\) Children born to obese mothers are twice as likely to be obese and to develop type 2 diabetes later in life.\(^9\)

This “double burden of malnutrition” can be attributed to rapid urbanization and the adoption of diets high in refined carbohydrates and fats, combined with a more sedentary lifestyle. This nutrition transition, if not curbed now, will result in high human and economic costs to the Salvadoran society. It will have adverse impacts on the ability of the health system to absorb the increased costs of treatment of diet-related diseases and will also affect the productivity of the workforce.

Vitamin A Deficiency
- Pregnant Women: 8%
- Preschool Children: 14%

Figure 3: 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.\(^9\)

References
19. 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

World Bank Nutrition-Related Activities in El Salvador
The World Bank is currently supporting the US$80 million Public Health Care System Strengthening project. This project seeks to expand coverage and quality of priority health care services including nutrition, improve equity for access and utilization; and strengthen the Government’s stewardship capacity to manage public health functions.

More information about nutrition activities in the Latin America Region can be found at: 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 cost.\(^9\)