

Bangladesh

Source: Bangladesh Demographic and Health Survey (DHS) 2011, unless otherwise noted.

NUTRITION PROFILE

March 2014

Why Invest in Nutrition?

- Of the 15 million children under 5 years of age in Bangladesh, approximately 6.2 million (41%) are stunted. These undernourished children have an increased risk of mortality, illness and infections, delayed development, cognitive deficits, poorer school performance, and fewer years in school.
- The mortality rate for children under 5 in Bangladesh is 53 per 1,000 live births—nearly 45% of these child deaths are attributable to various forms of undernutrition.
- Malnutrition undermines human capital and economic productivity and can limit progress in achieving at least 6 of the 8 Millennium Development Goals and the World Health Assembly targets.
- Investing in nutrition in Bangladesh can significantly reduce child mortality, improve children's school performance, and result in greater economic productivity for the nation.

Summary of Nutritional Status and Priorities

Maternal undernutrition peaks at 38% among women 15–19 years of age who have had a birth in the past 3 years. This underlies high levels of low birth weight (22%), stunting (41%, or 6.2 million children under 5), and wasting (16%, or 2.2 million children under 5) in Bangladesh. Anemia affects over two-thirds of children under 2 and half of pregnant women. Key interventions to address malnutrition in Bangladesh need to focus on maternal and adolescent nutrition, essential newborn care, appropriate infant and young child feeding practices, and community management of acute malnutrition, while taking into account factors that influence nutrition such as poverty, gender inequality, and high rates of adolescent marriage and subsequent births that lead to an intergenerational cycle of malnutrition. While Bangladesh has seen impressive reductions in poverty, it is still a significant factor influencing malnutrition: 54% of children in the lowest wealth quintile are stunted compared to 26% in the highest (United Nations).

Adolescent nutrition. Underweight in women of childbearing age is the highest for adolescent girls 15–19 years of age. Twenty-four percent of “ever-married” adolescent girls (and 38% of adolescents who have had a birth in the last 3 years) are underweight compared to their older peers. The age-specific fertility rate has remained consistently high, while the total fertility rate has reduced significantly. The median age at first marriage is 15.8 and the median age at first birth is 18.3.

Maternal nutrition and low birth weight. Women of reproductive age suffer concerning rates of

malnutrition (24% underweight) and anemia (42%). Childbearing frequently begins during adolescence, contributing to poor maternal nutritional status and birth outcomes, including high levels of low birth weight (22%). At the opposite end of the nutrition spectrum, overweight and obesity among “ever-married” women has nearly doubled since 2004 from 9 to 17%.

Stunting. Since 2004, stunting among children under 5 years has declined 1.4 percentage points per year, however, 35% of children under 2 and 41% of children under 5 are stunted. The greatest increases in stunting prevalence occur between approximately 6 and 12 months of age, although due to the high rate of intrauterine growth restriction, low birth weight, and suboptimal breastfeeding practices, 10 to 20% of children already have compromised growth in the first 6 months of life.

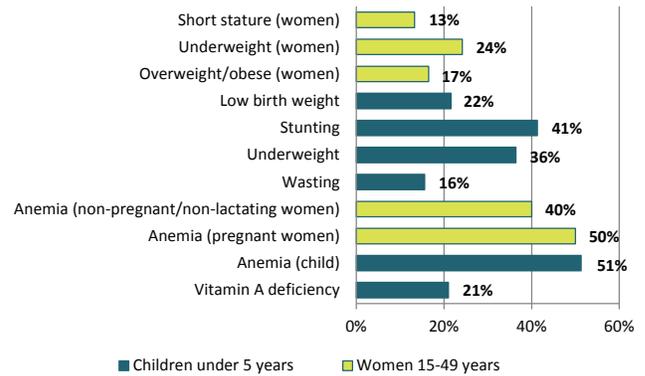
Wasting. The prevalence of wasting in Bangladesh has remained the same in recent years, around 16% across the under 5 age group. Children who are very small at birth are close to twice as likely to be wasted as children who are average size or large at birth and wasting is not correlated with maternal education or wealth quintiles in Bangladesh. Coverage with therapeutic services of children under 5 with severe wasting was estimated at 10% in 2012 (WFP Bangladesh).

Child anemia. In addition to high maternal anemia, half of children under 5 are anemic and an alarming proportion of children 6–23 months of age are anemic

(71%) according to DHS data. Research estimates that roughly 20–50% of anemia in young children in Bangladesh is due to iron deficiency (icddr,b 2010; icddr,b et al. 2013) caused by high levels of low birth weight (causing low iron stores at birth), maternal anemia, low intake of iron-rich foods in this age group, the absence of regular iron supplementation, and minimal use of deworming medication. Other causes of anemia may include deficiencies of vitamin A, folic acid, B12, and other B vitamins; arsenic contamination; and genetic hemoglobin disorders.

Micronutrient deficiencies. A national salt iodization policy has been successful at reducing iodine deficiency, with more than three-quarters of children under 5 living in households with adequately iodized salt and the median urinary iodine concentration in the “optimal” range among school-age children. Vitamin A deficiency among preschool children was estimated at 21% in 2011. Zinc deficiency affects 45% of preschool children and 57% of non-pregnant/non-lactating women. Twenty-two percent of non-pregnant/non-lactating women are deficient in B12 and 9% are deficient in folate (icddr,b et al. 2013).

Malnutrition Indicators Among Children and Women in Bangladesh*



Sources: DHS 2011; icddr,b et al. 2013 (for vitamin A deficiency)

* “Ever married” women 15–49 years of age. Overweight/obese and underweight indicators exclude pregnant women and women with a birth in the previous 2 months.

Note: The *National Micronutrients Status Survey 2011–12* estimated that 33% of children under 5 and 26% of non-pregnant/non-lactating women were anemic. The median urinary iodine concentration (UIC) for school-age children was 145.7 ug/L and for non-pregnant/non-lactating women 122.6 ug/L; the proportion of school-age children with low UIC (< 100 ug/L) was 40% and 42% among non-pregnant/non-lactating women, according to the micronutrient survey.

Key Drivers of Maternal and Child Malnutrition in Bangladesh

Immediate and Underlying

- Maternal malnutrition contributing to low birth weight
- Suboptimal infant and young child feeding practices, including delayed initiation of breastfeeding, short period of exclusive breastfeeding, and low dietary diversity
- Inadequate sanitation and hygiene practices, including inadequate access to hygienic toilets/latrines and handwashing practices
- Infectious disease burden, particularly diarrhea disease (including episodes caused by intestinal parasites) associated with poor sanitation/hygiene
- Low dietary quality of the diets of women and children, due to:
 - Low intake of micronutrient-rich foods and low dietary diversity among women and children under 2; gender and age discrimination in terms of food distribution at the household level worsens dietary intake (both quantity and quality) of women and children
 - Low coverage of micronutrient supplementation, particularly iron for children (and presumably pregnant women)

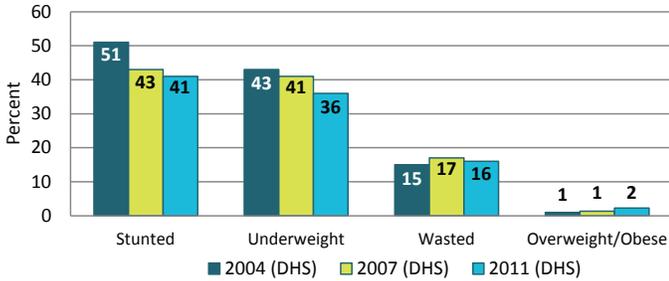
- Food insecurity, particularly due to insufficient food access caused by high levels of poverty, as well as food price volatility, natural disasters, and limited land for cultivation
- Insufficient access to/utilization of preventative and curative health services for common childhood illnesses and pregnancy/delivery care

Basic

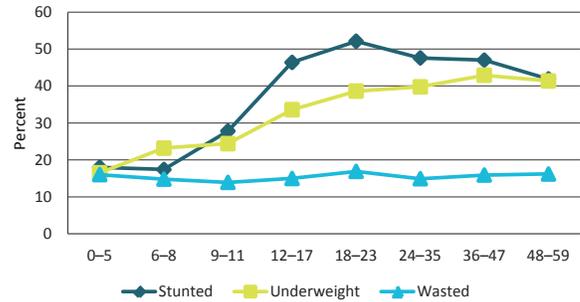
- Low social status of women, which restricts access to health services and control of income
- High levels of poverty, which restricts access to food
- Marriage and childbearing during adolescence, leading to poor birth outcomes (for example, low birth weight), as well as worsened nutritional status among adolescent mothers
- Weaknesses in nutrition governance, particularly:
 - Lack of coordination to act on nutrition between and among government ministries, donors, different levels of government, and implementing bodies, such as nongovernmental organizations, at the local level
 - Absence of shared targets and a unified vision of malnutrition—what it means and what is needed to combat it—at both the policy level and by civil society

Child Nutrition

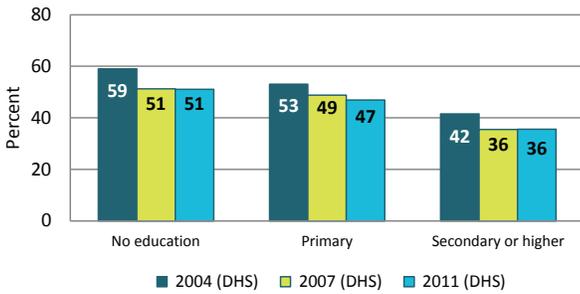
Trends in Nutritional Status of Children Under Age 5, 2004–2011



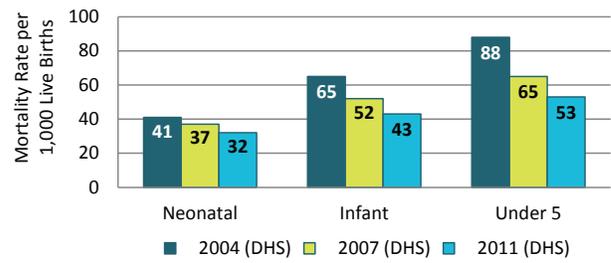
Nutritional Status of Children by Age, 2011



Stunting Prevalence of Children Under 5 by Maternal Education Levels, 2004–2011

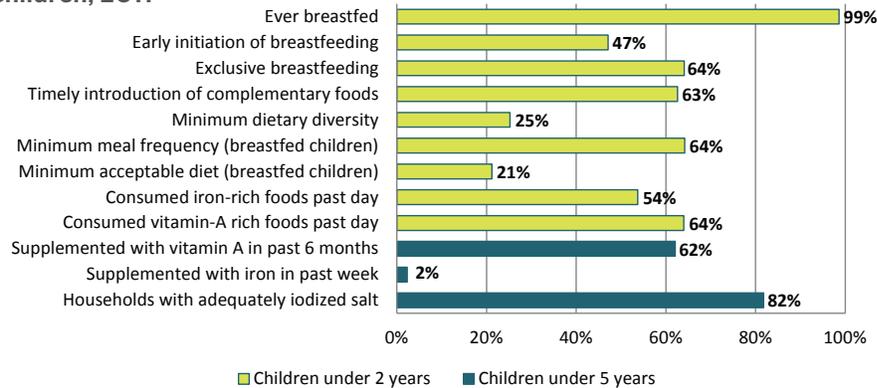


Child Mortality Rates, 2004–2011*

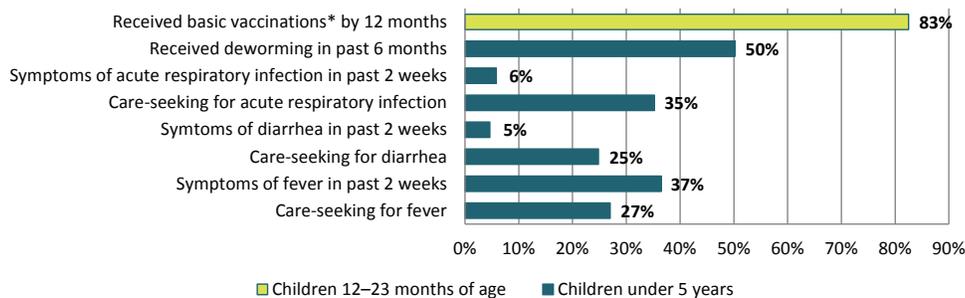


* Data are for the time period within the previous 5 years of the survey.

Dietary Practices of Children, 2011



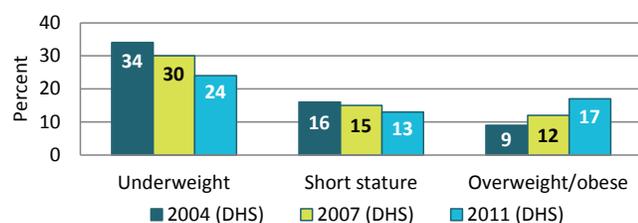
Child Health Indicators, 2011



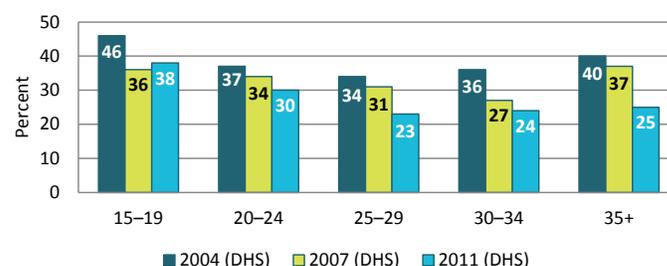
* Basic vaccinations include BCG, measles, and three doses each of DPT and polio vaccine.

Maternal Nutrition

Trends in Nutritional Status of Women (15–49 years), 2004–2011*

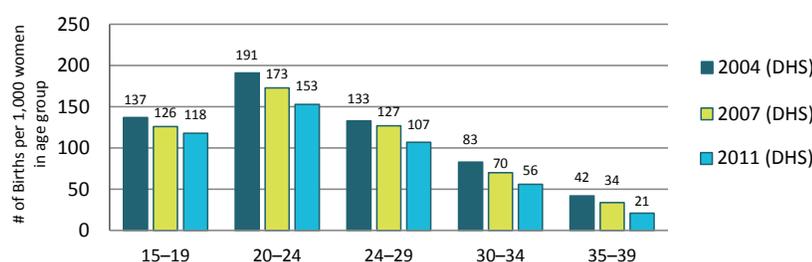


Trends in Maternal Underweight by Age, 2004–2011*

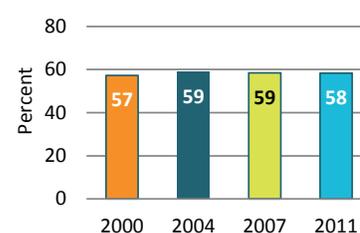


* “Ever-married” women 15–49 years with live birth in the past 3 years.

Fertility Rate by Age Among “Ever-Married” Women (15–39 Years)



Women 15–19 Years Who Have Begun Childbearing by 19



Maternal Health Indicators

Maternal mortality ratio (per 100,000 live births)	194	
Total fertility rate (children per women)	2.3	
Median age at first marriage (of women 20–49 years)	15.8	
Median age at first birth (of women 20–49 years)	18.3	
% of women 15–19 years who have begun childbearing by 19	58.3	
Median number of months since preceding birth (of women 15–49 years)	47.4	
% of married women currently using any method of family planning	61.2	
% of married women with an unmet need for family planning	13.5	
% of women 15–49 years with a live birth in the past 3 years receiving antenatal care from a “medically-trained” or “skilled” provider*	54.6	
% of women 15–49 years with birth in the past 3 years who delivered in a health facility	28.8	
% of women 15–49 years with birth in the past 3 years who delivered with a “medically-trained” or “skilled” provider*	31.7	
	(overall)	42.4
% anemic (pregnant: Hb < 11 g/dL; non-pregnant: Hb < 12 g/dL)	(pregnant)	49.6
	(non-pregnant/non-lactating)	40.0**
% of women with birth in the last 5 years given vitamin A supplementation after birth of last child	26.9	
% of women with birth in the last 5 years given any iron supplementation during last pregnancy	No data	
% of women with birth in the last 5 years who took at least 90 days of iron supplementation during pregnancy of last child	No data	
% of women with birth in the last 5 years who took deworming medication in last pregnancy	No data	
% living in houses with iodized salt	82.3	

Sources: DHS 2011; BRAC 2011 (for maternal mortality)

* “Medically-trained” providers (according to the 2011 DHS) included: doctor, nurse, midwife, family welfare visitor, community skilled birth attendant, and medical assistant/sub-assistant community medical officer.

** The *National Micronutrients Status Survey 2011-12* estimated that 26% of non-pregnant/non-lactating women were anemic.

Food Security; Diet Diversity; and Water, Sanitation, and Hygiene

Food Security Indicators	
Global Hunger Index (2013)	19.4 (serious level of hunger)
% of households with poor or limited food consumption (food insecure)	25
Proportion undernourished in total population (%) (2010–2012)	17
Food supply (kcal/capita/day) (2009)	2,481
Depth of food deficit (kcal/capita/day) (2011–2013)	111
Diet Diversity Indicators	
% of dietary energy supply from cereals, roots, and tubers (2009–2010)	80
Average supply of protein from an animal source (grams/capita/day) (2008–2010)	9
Water, Sanitation, and Hygiene Indicators	
% of population with access to improved drinking water sources	99
% of population with access to sanitation facilities	37
% of households using appropriate treatment method for drinking water	10

Sources: FAO 2013; von Grebmer et al. 2013 (for Global Hunger Index rating); WFP et al. 2009 (for % food insecure); FAO et al. 2012 (for undernourished); FAOSTAT (<http://faostat3.fao.org/faostat-gateway/go/to/browse/FB/FB/E>) (for food supply); 2011 DHS (for water, sanitation, and hygiene indicators)

Gender

Gender inequality is pervasive in Bangladesh and is a significant underlying factor that exacerbates food insecurity and malnutrition in Bangladesh. The clearest manifestation of this relationship is the high prevalence of early marriage and adolescent pregnancy that reflect prevailing gender norms that discriminate against women and girls and contributes significantly to the high prevalence of low birth weight and chronic malnutrition in their children. Nearly 60% of adolescent girls have given birth to a child by 19 years of age, which is a trend that has remained virtually unchanged over the years. In Bangladesh, marriage occurs early for women relative to men. Nearly 74% of women 20–49 years of age are married by the age of 18, in contrast only 6% of men 20–49 years are married by the age of 18.

Gender inequality is also reflected in several other key indicators. For example, only 15% of women of childbearing age reported being employed and among them only 34% reported being able to decide on their own how to dispose of that income. The 2007 DHS found that domestic violence is pervasive and 53%

of women of childbearing age reported ever having experienced various forms of domestic violence in their lifetime. The 2011 DHS found that 42% of women of childbearing age 15–49 years reported participating in decisions about their own health, major household decisions, and their children's health and that of visiting relatives. However, among adolescent girls 15–19 years, only 20% reported participating in those same decisions. With childbearing beginning early, young women with children under 2 years have the least decision-making power and the least access to resources when their children have the greatest nutritional needs. The decision of when and whom to marry is made by family members, and subsequently the decision of when and at what age to begin childbearing is also made by family members. In this context promoting shared responsibility for the nutritional status of women and children among husbands and parents-in-law in addition to working with young mothers is essential. But delaying marriage and first pregnancy will also go a long way toward reducing the overall prevalence of malnutrition in Bangladesh.

Government Policies and Program Environment: Needs and Challenges

Policies. The Government of Bangladesh identifies nutrition as a cross-cutting issue and key to poverty reduction (WFP Bangladesh 2012) and has committed to the Scaling Up Nutrition (SUN) Movement. Nutrition policy coordination and implementation, since 2011, is undergoing a process of “mainstreaming” throughout the various sectors involved in planning and implementing interventions (Taylor 2012). Expanded nutrition services are being integrated into the health sector (through the Health, Population and Nutrition Sector Development Program, 2011–2016) to be implemented through the National Nutrition Service. This integration and mainstreaming process, in addition to aiming to increase access to comprehensive nutrition services, aims to ensure greater coordination of a multisectoral approach to malnutrition, strengthen capacity of health services to respond to nutrition issues, and increase monitoring and evaluation capabilities (WFP Bangladesh 2012).

Nutrition-Specific Policies

National Plan of Action for Nutrition (1997, update in progress)

Health, Population and Nutrition Sector Development Program (2011–2016)

National Food Policy Plan of Action (2008–2015)

National Food Safety and Quality Policy and Plan of Action Review of Food Safety and Quality Related Policies (2012 draft)

Implementation Code of the Marketing of Breast Milk Substitutes (2012 draft)

National Guidelines for Management of Severely Malnourished Children (2008)

National Strategy for Anemia Prevention and Control (2007)

National Strategy for Infant and Young Child Feeding (2007)

The Prevention of Iodine Deficiency Diseases Act (1989)

Breast Milk Substitute (Regulation of Marketing) Ordinance (1984)

Programs. The National Nutrition Service plays a coordination and advocacy role in mainstreaming nutrition activities across sectors, including those implemented by the ministries of Women and Children Affairs; Agriculture; Food and Disaster Management; and Industries (WFP Bangladesh 2012). Through the National Nutrition Service, expanded nutrition services (including both preventive and therapeutic interventions) are being integrated into all facilities providing maternal, neonatal, and child health. Health and family planning workers will need to be trained in nutrition service provision.

Needs and challenges. Policy and program analyses indicate that implementation of policies, strategies, and guidelines is weak and limited in coverage (WFP Bangladesh 2012). Coordination of actions and programs is particularly fragmented in Bangladesh, at multiple levels, and lacking real leadership (ibid). For example, intersectoral coordination between Government ministries has been deemed ineffective, one assessment indicating that motivation and empowerment to coordinate across ministries may be lacking within the Ministry of Health and Family Welfare (Taylor 2012). A lack of shared goals and targets and a fragmented understanding of the broader picture of nutrition needs and issues, both by policymakers and civil society, have also been identified as weaknesses in nutrition governance (ibid). At the ground level, needed skills and training to make policies operational have also been judged to be inadequate (WFP Bangladesh 2012) as local-level health extension workers will be tasked to address nutrition in addition to many other health-related tasks, from hygiene to immunization (Taylor 2012).

Development Partner Support

- The Government of Bangladesh’s Health Sector Development Program from 2011–2016, which includes a significant focus on mainstreaming nutrition at scale across the country, is funded by the World Bank and a Multi-Donor Trust Fund (consisting of USAID, AusAID, DIFD, and SIDA).
- In collaboration with the Micronutrient Initiative, UNICEF provides technical assistance to salt manufacturers to promote proper salt iodization and support twice-yearly vitamin A supplementation through National Vitamin A Plus Campaigns and during National Immunization Days.
- UNICEF provides powders of iron, folic acid, and emergency food supplements to low-income areas.

- UNICEF, through the MYCSNIA Program (in partnership with the EU), promotes counseling on infant and young child feeding, the use of micronutrient powders, and the consumption of locally-produced micronutrient-rich foods.
- WFP supports the prevention and treatment of moderate acute malnutrition and implements a program that aims to strengthen the resilience of vulnerable households to disasters through food and cash work projects.
- FAO works to reduce food insecurity through nutrition, agriculture, and poverty reduction strategies that also include climate change adaptation and gender equality activities.
- WHO supports the operationalization of the strategic plan for infant and young child feeding and management of severe malnutrition in health care facilities.
- The EU and Australian Government have programs focused on food security.
- The Bill and Melinda Gates Foundation fund a large infant and young child feeding program.

Recommended Nutrition Priorities

Key nutrition priorities for Bangladesh include focusing on adolescent nutrition, maternal malnutrition and low birth weight, stunting, wasting, anemia and micronutrient deficiencies, and essential newborn care. Programs and activities should be focused on women and children in the lowest wealth quintile, who are disproportionately affected. USAID's most significant investment in nutrition in Bangladesh are through the Food for Peace Title II development food assistance programs and the Feed the Future project. In addition, Global Health projects are expected to integrate nutrition. However, increasing allocation for nutrition would help bolster efforts to reduce malnutrition in Bangladesh. Among existing USAID-funded activities and programs, this includes continuing to expand and support the integration of evidence-based nutrition-specific interventions and actions. Additional opportunities include:

- Expanding and strengthening technical assistance to USAID's partners, including the Government of Bangladesh, to strengthen implementation of nutrition-specific interventions
- Expanding and strengthening investments to improve the nutrition of adolescent girls and women of reproductive age, including addressing anemia before, during, and after pregnancy; improving pre-pregnant weight; increasing weight gain in pregnancy; and increasing dietary intake, quality, and diversity during pregnancy
- Expanding efforts in advocacy, policy support, system strengthening, and capacity strengthening within USAID health programs and within the Government of Bangladesh's health service delivery focused on the prevention of malnutrition among children under 2 and the management of acute

malnutrition among children under 5 and pregnant women

In terms of opportunities to support the Government of Bangladesh, these include supporting improved nutrition governance and service delivery by:

- Using nutrition advocacy to strengthen accountability and commitment to quality nutrition service delivery and decentralizing nutrition advocacy activities to engage civil society and locally-elected leaders
- Promoting greater intersectoral coordination of nutrition activities within the government
- Encouraging a unified vision of malnutrition and its causes in Bangladesh and supporting and aligning with the SUN movement
- Investing to strengthen community-level nutrition service delivery and the capacity of community service providers, family welfare assistants, and health assistants to provide quality nutrition services

USAID can also work in close coordination with other donors by:

- Supporting the SUN movement and other Government of Bangladesh initiatives to promote nutrition service delivery
- Aligning resource allocation to limit duplication of activities that are effectively funded by other donors and leveraging these donor investments to strategically invest in nutrition, focusing on areas that need added resources such as the management of acute malnutrition, adolescent nutrition, and quality nutrition service delivery

Recommended Indicators to Monitor Nutritional Impact

It is recommended that USAID consider incorporating the following key nutrition indicators into the programs and projects it funds in order to specifically monitor the impact of USAID programs on maternal and child nutrition status.

1. Prevalence of underweight children under 5 years of age (< -2 SD)
2. Prevalence of stunted children under 5 years of age (< -2 SD)
3. Prevalence of stunted children under 2 years of age (< -2 SD)
4. Prevalence of wasted children under 5 years of age (< -2 SD)
5. Prevalence of underweight women (BMI < 18.5)
6. Women's dietary diversity: mean number of food groups consumed by women of reproductive age
7. Prevalence of exclusive breastfeeding of children under 6 months of age
8. Prevalence of children 6–23 months receiving a minimum acceptable diet

While nutrition-sensitive interventions can have an impact on these indicators, it is critical to implement nutrition-specific activities that address the direct causes of malnutrition in order to see reductions in these key indicators.

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Recommended Citation:

Chaparro, C.; Oot, L.; and Sethuraman, K. 2014. *Bangladesh Nutrition Profile*. Washington, DC: FHI 360/FANTA.

This nutrition profile is made possible by the generous support of the American people through the support of the Office of Health, Infectious Diseases, and Nutrition, Bureau for Global Health, U.S. Agency for International Development (USAID) and USAID Bureau for Asia under terms of Cooperative Agreement No. AID-OAA-A-12-00005, through the Food and Nutrition Technical Assistance III Project (FANTA), managed by FHI 360.

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The intended purpose of this profile is to provide a broad overview of the status of nutrition in Bangladesh in order to inform potential US-supported efforts. To view more information about USAID's Global Health and Feed the Future (FTF) initiatives and their extensive nutrition contributions in Bangladesh, please visit: www.usaid.gov/what-we-do/global-health/nutrition.