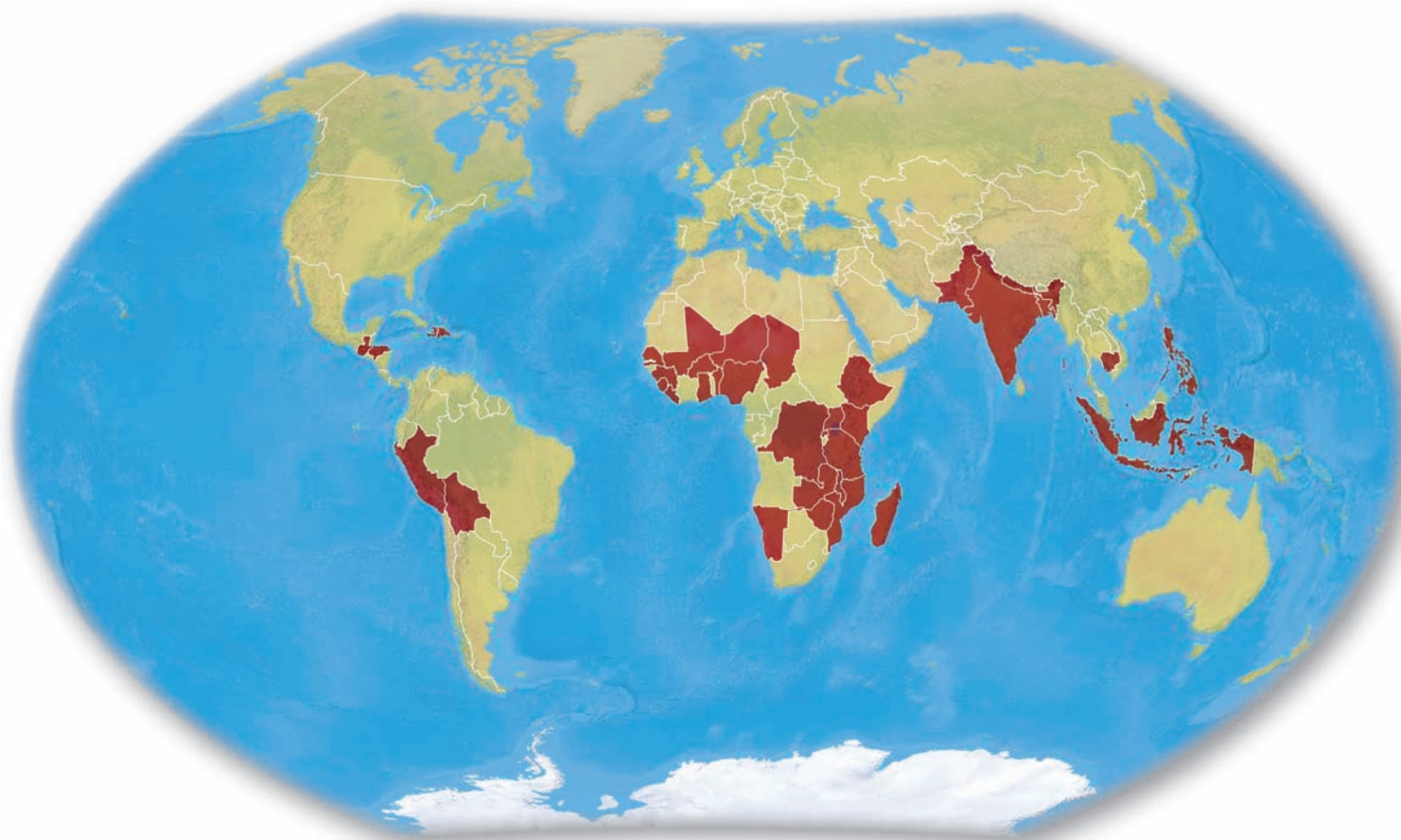




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NUTRITION UPDATE 2010



September 2010

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Nutrition Update 2010

Monica T. Kothari
Noureddine Abderrahim

ICF Macro
Calverton, Maryland, USA

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MEASURE DHS assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Funded by the U.S. Agency for International Development (USAID) under the terms of Contract No. GPO-C-00-08-00008-00, MEASURE DHS is implemented by ICF Macro in Calverton, Maryland. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Agency for International Development.

The main objectives of the MEASURE DHS project are:

- 1) to provide decision makers in survey countries with information useful for informed policy choices
- 2) to expand the international population and health database
- 3) to advance survey methodology
- 4) to develop in participating countries the skills and resources necessary to conduct quality demographic and health surveys

Information about the MEASURE DHS project or the status of MEASURE DHS surveys is available on the Internet at <http://www.measuredhs.com> or by contacting:

ICF Macro
11785 Beltsville Drive, Suite 300
Calverton, MD 20705 USA
Telephone: 301-572-0200
Fax: 301-572-0999
Email: reports@measuredhs.com

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Nutrition impacts more than health outcomes. A robust evidence-base demonstrates the wide-reaching impact of improved nutrition on overall development. Investing in nutrition:

Improves productivity and reduces poverty: Improving nutrition can increase productivity and have long-term implications for a person's earning potential. Children in Guatemala who received diets that were higher in energy and protein between 1967 and 1977 had, on average, 46% higher wages as adults compared to those with lower quality diets (Hodinnott et al. 2008).

Contributes to national economic growth: Losses to GDP from undernutrition can be as high as 3%. Achieving nutritional sufficiency would result in \$120 billion per year in benefits as a result of longer, healthier, and more productive lives for hundreds of millions who are undernourished (FAO 2002). Micronutrient deficiencies alone cost India \$2.5 billion annually (Gagnolati 2007).

Reduces maternal and child mortality and morbidity: Over 3 million child deaths are attributable to maternal and child undernutrition. Poor nutrition increases susceptibility to infections and increases the likelihood of death from illnesses that would not otherwise be deadly (Black et al. 2008).

Realizes full human potential: Good nutrition in early childhood improves cognitive development and enables children to learn more effectively and stay in school longer. Increased protein and iron intake in the first two years of life show benefits to intellectual development up to 10 years later (Jukes et al. 2002).

Increases gender equity: Investments in girls' nutrition can advance the status of women and increase their ability to better care for their families. When assets and income are in the hands of women, evidence shows that agricultural productivity increases, poverty is reduced, and nutrition is improved. Women's education and status in the household is directly correlated to better nutrition outcomes for children. Analyses show that strengthening women's control over agricultural production can increase agricultural output by an average of 10%, and that equalizing gender status in South Asia and Africa would reduce the number of underweight children by at least 15 million (Alderman 2003).

Protects from infectious diseases and improves disease treatment: Food and nutrition support is a critical component of comprehensive HIV/AIDS care and treatment as well as effective TB treatment. Undernutrition hastens the progression of HIV by further weakening the immune system, increasing susceptibility to opportunistic infections and reducing the effectiveness of treatments. Food and nutrition support helps break this vicious cycle by improving the management of symptoms, nutritional status, response to treatment, and quality of life and productivity.

Reduces adult-onset chronic disease burden: Children whose early growth is restricted and gain weight rapidly later are more likely to have high blood pressure, diabetes, and both cardiovascular and metabolic diseases later in life (Hales and Barker 2001; Frank 2009).

Reduces conflict and vulnerability to economic, political, and environmental shocks: When a population's underlying nutrition is poor before a crisis, limited nutritional stores are depleted and the risk of disease and death increase (Marchione 2002). Conflict has triggered six of the seven major African famines since 1980, which resulted in millions of deaths from undernutrition.

Introduction

Good nutrition, especially in the window of development opportunity (from conception to 24 months), is essential to capitalize full intellectual capacity, educational performance, and productivity. Improving nutrition is critical for maternal and child health outcomes, a driver of economic growth and poverty reduction, and central to development. Addressing the direct and underlying causes of poor nutrition is critical for achieving the Millennium Development Goals (MDGs) and overall development objectives.

To inform national strategies and action plans to improve nutrition in women and children, the Demographic and Health Surveys (DHS) Program provides population level estimates of key nutrition indicators.

The *Nutrition Update 2010* provides information on nutritional status, anemia status, breastfeeding, introduction of solid, semi-solid or soft foods, minimum dietary diversity, minimum meal frequency, minimum acceptable diet, women's dietary diversity, and micronutrient supplementation among pregnant and post-partum women and infant and young children (less than five years). Except for reported data about Guatemala (which comes from the 2008-09 ENSMI, an RHS survey), the study summarizes data from the results of DHS surveys done in 35 countries between 2003 and 2009 in sub-Saharan Africa, South/Southeast Asia, Latin America, and the Caribbean. The majority of these countries are among those identified in the 2008 Lancet Series on Maternal and Child Health as having the greatest burden of undernutrition. All the data presented in this document were re-run for comparative purposes. Hence, some numbers in the report might not exactly match the DHS final country reports.

Nutritional status of children

Nutritional status is an outcome and impact measure, a key indicator to monitor when assessing progress towards achieving the MDGs. Marked differences, especially with regard to height-for-age and weight-for-age, are often seen among different subgroups within a country. **Tables 1-5** provide estimates of the nutritional status of all children and also children disaggregated by sex, place of residence, mother's highest level of education, and wealth quintile.

In DHS surveys anthropometric data are collected for all children under five years of age. Both height (length) and weight measurements are obtained for each child. Employing this information, the following standard indices are used to describe the nutritional status of children:

- Height/length-for-age (low height/length-for-age is an indicator of linear growth retardation due to chronic undernutrition also referred to as *stunting*)
- Weight-for-height (low weight-for-height is an indicator of acute undernutrition also referred to as *wasting*)
- Weight-for-age (low weight-for-age is an indicator of both acute and/or chronic undernutrition also referred to as *underweight*)

The nutritional status of children in **Tables 1-5** is presented in terms of Z-scores of less than -2 and -3 standard deviations (SD) compared with the WHO Child Growth standards.¹ All children below -2 SD for height/length-for-age, weight-for-height, and weight-for-age are considered to be stunted, wasted, and underweight, respectively.

¹ WHO Multicentre Growth Reference Study Group. 2006. *WHO Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development*. Geneva: World Health Organization. Available at http://www.who.int/childgrowth/standards/Technical_report.pdf

Nutritional status of women

Adequate maternal nutrition is important for the health and reproductive outcomes of women, child survival, and development. Low pre-pregnancy body mass index (BMI) and short stature of women are risk factors for poor birth outcomes and delivery complications. In developing countries maternal underweight is the leading risk factor for preventable death and disease; it also leads to low work productivity.

Table 6 presents data on short stature (less than 145 cm) among women age 15-49 years. The table also presents data on undernutrition among non-pregnant and non-postpartum women (who did not have a delivery in the two months preceding the DHS survey), defined as having a BMI [weight (in Kg)/height (in m²)] less than 18.5.

Anemia in women and children

Anemia—the condition of low levels of hemoglobin in the blood—is a widespread public health problem associated with increased risk of morbidity and mortality. Young children and pregnant and postpartum women are the most severely affected by iron deficiency because their demands for iron are high when they are growing and in pregnancy. The factors that contribute to the onset of anemia include malaria, hookworm or other helminth infections, nutritional deficiencies, chronic infections, genetic conditions, which vary by region (such as sickle cell and thalassemia), HIV/AIDS, and high fertility.

In DHS, the blood of women and children is tested for hemoglobin concentration. Given that hemoglobin requirements differ substantially depending on altitude of residence and smoking status, an appropriate adjustment for altitude and smoking in the raw hemoglobin values is made before women and children are classified by level of anemia in **Table 7**.

Infant and Young Child Feeding (IYCF) practices (breastfeeding and complementary feeding)

Adequate infant and young child feeding practices are essential for child survival, growth, and development. The global public health recommendation is to exclusively breastfeed infants for the first six months of life; thereafter, the goal is to meet the additional nutritional needs of growth by providing adequate quality and quantity of foods to children while continuing to breastfeed up to two years and beyond. Special attention and practical support should be provided to caregivers feeding children with exceptional circumstances, such as infants born to HIV positive mothers, low-birth-weight infants, and orphans and vulnerable children in emergency situations.

Tables 8-10 in this document provide data on the status of breastfeeding, introduction of solid, semi-solid or soft foods, minimum dietary diversity, minimum meal frequency and minimum acceptable diet calculated according to the new indicators and definitions of acceptable IYCF practices for infant and young children (WHO 2008; WHO 2010). Based on the guidelines for feeding breastfed and non-breastfed children, the indicators of IYCF practices presented in this document are comprised of the following components:

Breastfeeding practices

Children ever breastfed	Children born in the last 24 months who were ever breastfed
	Children born in the last 24 months
Early initiation of breastfeeding	Children born in the last 24 months who were put to the breast within one hour of birth
	Children born in the last 24 months
Exclusive breastfeeding	Infants 0-5 months of age who received only breast milk during the previous day
	Infants 0-5 months of age
Continued breastfeeding at 1 year and 2 years	Children 12-15 months of age who received breast milk during the previous day
	Children 12-15 months of age
	Children 20-23 months of age who received breast milk during the previous day
	Children 20-23 months of age

Complementary feeding practices

Introduction of solid, semi-solid or soft foods (6-8 months)	Infants 6-8 months of age who received solid, semi-solid, or soft foods during the previous day	
	Infants 6-8 months of age	
Minimum dietary diversity	Children 6-23 months of age who received foods from ≥ 4 food groups ¹ during the previous day	
	Children 6-23 months of age	
	Breastfed	Non-breastfed
Minimum meal frequency	Breastfed children 6-23 months of age who received solid, semi-solid, or soft foods the minimum number of times or more during the previous day ²	Non-breastfed children 6-23 months of age who received solid, semi-solid, or soft foods or milk feeds the minimum number of times or more during the previous day ^{2,3}
	Breastfed children 6-23 months of age	Non-breastfed children 6-23 months of age
Minimum acceptable diet	Breastfed children 6-23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day	Non-breastfed children 6-23 months of age who received at least 2 milk feedings and had at least the minimum dietary diversity, not including milk feeds and the minimum meal frequency during the previous day ³
	Breastfed children 6-23 months of age	Non-breastfed children 6-23 months of age

¹ The 7 food groups used for tabulation of this indicator are: (1) grains, roots and tubers; (2) legumes and nuts; (3) dairy products (milk, yogurt, cheese); (4) flesh foods (meat, fish, poultry, and liver/organ meats); (5) eggs; (6) vitamin-A rich fruits and vegetables; and (7) other fruits and vegetables.

² Minimum: For breastfed children, 2 times if 6-8 months and 3 times if 9-23 months; for non-breastfed children, 4 times for children 6-23 months

³ Because of the unavailability of data on the number of milk feedings for non-breastfed children, in **Table 10** the indicator has been presented only for breastfed children.

Women's dietary diversity

Adequate maternal nutrition is important for the survival of both mother and child. In addition, good nutrition promotes women's overall health, productivity, and well-being.

Table 11 presents the food groups consumed by mothers who gave birth in the last three years, thereby providing important information on maternal diet quality. This information has policy and programmatic implications as a proxy for the micronutrient adequacy of the mother's diet.

Iron supplementation of pregnant women and children

Iron deficiency with or without anemia has important consequences for maternal and child health. Iron supplementation is the most common strategy currently used to control iron deficiency in developing countries. Traditionally, target groups for supplementation programs have been pregnant women and infants/young children. These populations are chosen primarily because of the short- and long-term benefits of the supplementation programs for both groups.

Table 12 provides data on iron supplementation during the most recent pregnancy of women age 15-49 years with a birth in the past five years. The table also includes information about iron supplementation of children age 6-59 months.

Vitamin A supplementation of women and children

Vitamin A deficiency negatively impacts maternal health and has been associated with increased mortality during the early postpartum period. The provision of a high dose of vitamin A in the first six to eight weeks after delivery can improve a mother's health, improve her vitamin A status, and increase the vitamin A content of breast milk.

Vitamin A supplementation is an important child survival intervention. In children with concurrent vitamin A deficiency (VAD) and measles, vitamin A supplementation can reduce the risk of measles-related fatalities. In order to reach large numbers of children, the provision of vitamin A supplements is often integrated into national immunization days for polio or measles vaccination.

Table 13 provides data on the postpartum (within eight weeks of delivery) vitamin A supplementation of women age 15-49 with a birth in the past five years and vitamin A supplementation of children age 6-59 months in the six months preceding the survey.

Household use of iodized salt

The most common clinical symptom of iodine deficiency is goiter. However, iodine deficiency is also the most common cause of preventable brain damage among children in-utero and infants and young children. In women, iodine deficiency can lead to spontaneous abortions, stillbirths, and perinatal mortality. The negative impacts of iodine deficiency can be prevented by delivery of sufficient iodine in the diet. Although iodine does not occur naturally in specific foods, the most common vehicle for iodine is fortified common table salt. However, there are inevitable losses in the time between the production of iodine and its consumption because iodine is volatile in nature.

In DHS surveys, salt is tested at the household level to monitor the level of iodine in the salt being consumed. **Table 14** presents the information on the percentage of households that were found to be using salt with the desired level of iodine (i.e., ≥ 15 ppm).

Deworming of pregnant women and children

Worms, by competing for nutrients in the body of young children, aggravate undernutrition, anemia, and stunting levels and retard both physical and cognitive development. Moreover, if pregnant women are infected, worms contribute to their already compromised iron status and to the birth of children with low birth weights. Deworming is an often overlooked intervention for improving nutritional status.

Table 15 presents information on deworming pregnant women and children in countries where data was collected in a DHS survey.

DHS surveys included in this report

Sub-Saharan Africa

Benin 2006
Burkina Faso 2003
Chad 2004
Congo DR 2007
Ethiopia 2005
Ghana 2008
Guinea 2005
Kenya 2008-09
Liberia 2007
Madagascar 2003-04
Malawi 2004
Mali 2006
Mozambique 2003
Namibia 2006-07
Niger 2006
Nigeria 2008
Rwanda 2005
Senegal 2005
Sierra Leone 2008
Tanzania 2004-05
Uganda 2006
Zambia 2007
Zimbabwe 2005-06

South/Southeast Asia

Bangladesh 2007
Cambodia 2005
India 2005-06
Indonesia 2007
Nepal 2006
Pakistan 2006-07
Philippines 2008

Latin America and the Caribbean

Bolivia 2003
Dominican Republic 2007
Guatemala 2008-09*
Haiti 2005-06
Honduras 2005-06
Peru 2004-08 Continuous

*ENSMI (RHS Survey)

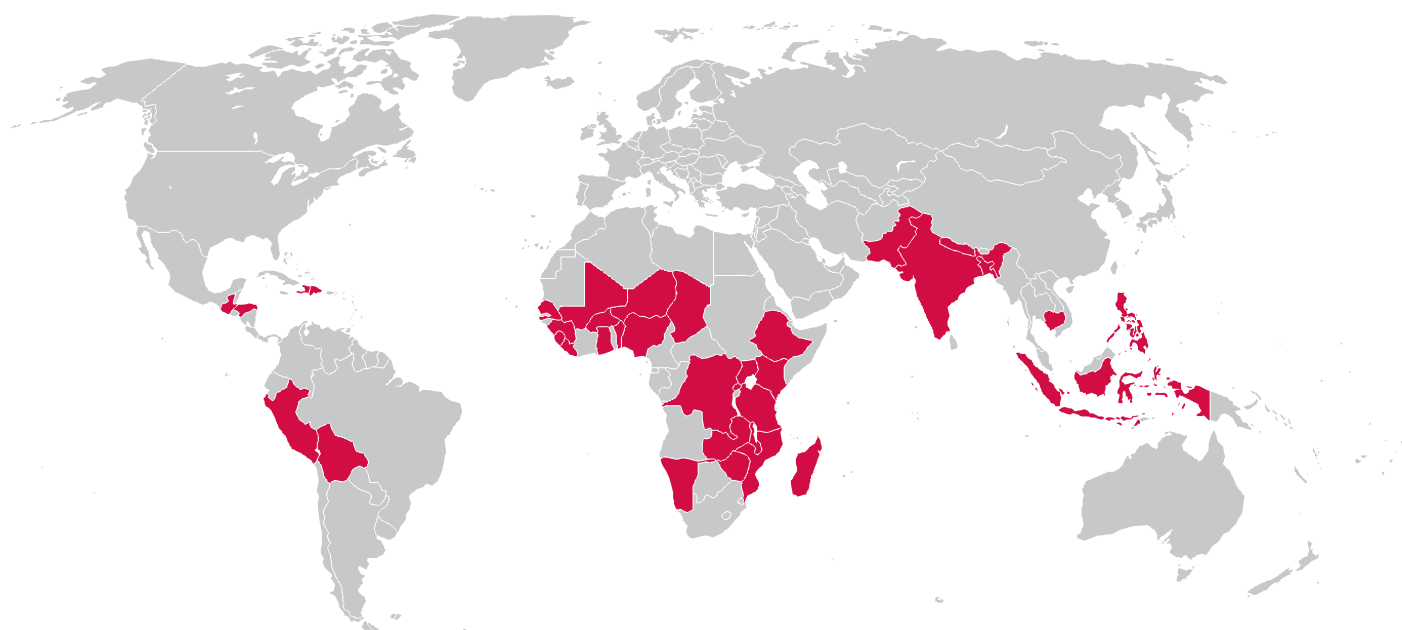


Table 1: Nutritional status of children

Percentage of children under 5 years who stayed in the household the night before the interview classified as undernourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, when compared with WHO Child Growth Standards, DHS Surveys 2003-2009

Country and year of DHS	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Sub-Saharan Africa						
Benin 2006	43.1	22.4	8.4	2.9	18.4	4.9
Burkina Faso 2003	43.4	23.3	21.1	9.4	33.2	14.0
Chad 2004	44.7	26.3	15.9	6.3	32.7	13.3
Congo DR 2007	45.5	24.2	10.0	4.3	25.1	8.4
Ethiopia 2005	50.8	28.1	12.2	4.4	32.9	11.4
Ghana 2008	28.0	9.8	8.5	2.2	13.9	3.1
Guinea 2005	39.3	18.8	10.7	4.0	22.2	7.3
Kenya 2008-09	35.3	14.2	6.7	1.9	16.1	3.6
Liberia 2007	39.4	20.4	7.5	2.8	19.2	5.8
Madagascar 2003-04	53.2	28.9	14.6	5.1	36.2	11.6
Malawi 2004	52.5	26.7	6.0	2.8	17.3	4.3
Mali 2006	37.7	19.3	15.2	5.9	26.7	9.7
Mozambique 2003	47.0	23.2	5.2	1.9	19.7	6.4
Namibia 2006-07	29.0	9.9	7.5	1.9	16.6	3.8
Niger 2006	54.8	34.0	12.4	4.2	38.6	14.7
Nigeria 2008	40.6	22.8	13.9	7.0	23.1	9.0
Rwanda 2005	51.1	24.0	4.7	1.5	17.5	4.4
Senegal 2005	19.6	7.1	8.5	2.1	14.2	3.5
Sierra Leone 2008	36.4	20.6	10.2	4.2	21.1	7.1
Tanzania 2004-05	44.3	17.5	3.5	0.9	16.4	3.7
Uganda 2006	38.1	15.0	6.1	2.0	15.9	4.1
Zambia 2007	45.4	21.0	5.2	2.0	14.6	2.9
Zimbabwe 2005-06	34.6	13.9	6.9	2.5	13.2	3.1
South/Southeast Asia						
Bangladesh 2007	43.2	16.1	17.4	2.9	41.0	11.8
Cambodia 2005	42.7	16.7	8.4	1.8	28.1	7.2
India 2005-06	48.0	23.7	19.8	6.4	42.5	15.8
Indonesia 2007	na	na	na	na	na	na
Nepal 2006	49.3	20.2	12.6	2.6	38.6	10.6
Pakistan 2006-07	na	na	na	na	na	na
Philippines 2008	na	na	na	na	na	na
Latin America and the Caribbean						
Bolivia 2003	32.3	11.0	1.7	0.6	5.4	1.2
Dominican Republic 2007	9.8	2.3	2.2	0.7	3.1	0.3
Guatemala 2008-09 ^a	49.8	21.2	1.4	0.5	13.1	2.1
Haiti 2005-06	29.4	10.0	10.2	3.2	18.1	6.4
Honduras 2005-06	30.0	9.6	1.3	0.2	8.3	1.3
Peru 2004-08 Continuous	28.1	7.7	0.8	0.2	4.4	0.4

na = Data not available

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey.

The -2 SD columns include the children who are below -3 SD.

Table 2: Nutritional status of children by sex

Percentage of children under 5 years who stayed in the household the night before the interview classified as undernourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by sex, when compared with WHO Child Growth Standards, DHS Surveys 2003-2009

Country and year of DHS	Sex	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Sub-Saharan Africa							
Benin 2006	Male	46.2	24.4	9.1	3.2	20.5	5.5
	Female	40.0	20.3	7.6	2.5	16.2	4.4
Burkina Faso 2003	Male	45.5	24.9	21.7	9.5	34.5	14.6
	Female	41.1	21.7	20.6	9.2	31.8	13.5
Chad 2004	Male	45.4	27.4	17.2	6.7	33.4	13.7
	Female	44.0	25.1	14.7	5.9	32.1	13.0
Congo DR 2007	Male	48.1	25.3	11.4	5.3	27.5	9.9
	Female	43.1	23.1	8.7	3.4	22.7	7.0
Ethiopia 2005	Male	52.3	29.2	13.7	4.9	34.0	12.4
	Female	49.4	27.1	10.6	3.9	31.9	10.3
Ghana 2008	Male	29.6	11.0	9.2	2.2	15.4	3.7
	Female	26.2	8.6	7.7	2.2	12.4	2.6
Guinea 2005	Male	41.9	20.4	11.6	4.4	24.1	8.1
	Female	36.7	17.2	9.9	3.4	20.3	6.4
Kenya 2008-09	Male	37.4	16.0	7.8	2.1	16.8	4.2
	Female	33.1	12.3	5.6	1.6	15.4	3.0
Liberia 2007	Male	42.2	22.2	7.5	2.7	20.5	6.2
	Female	36.5	18.5	7.4	2.9	17.8	5.5
Madagascar 2003-04	Male	55.1	30.7	17.3	6.8	38.3	12.4
	Female	51.4	27.3	11.9	3.4	34.2	10.8
Malawi 2004	Male	55.2	29.9	6.7	3.2	18.3	4.4
	Female	49.8	23.7	5.3	2.5	16.4	4.2
Mali 2006	Male	40.2	20.9	16.0	6.2	28.4	10.5
	Female	35.2	17.6	14.4	5.6	25.0	9.0
Mozambique 2003	Male	49.5	25.8	5.4	2.0	20.6	6.8
	Female	44.7	20.7	4.9	1.8	18.8	5.9
Namibia 2006-07	Male	31.5	11.8	7.3	1.7	17.6	4.0
	Female	26.4	7.9	7.6	2.1	15.5	3.6
Niger 2006	Male	56.7	35.2	13.8	4.7	40.4	16.1
	Female	52.7	32.6	11.0	3.7	36.7	13.2
Nigeria 2008	Male	43.0	24.8	14.4	7.4	24.5	9.9
	Female	38.4	20.9	13.4	6.5	21.7	8.1
Rwanda 2005	Male	52.5	26.5	4.7	1.6	18.3	4.7
	Female	49.9	21.6	4.6	1.5	16.7	4.1
Senegal 2005	Male	20.7	7.6	8.9	2.0	14.1	3.7
	Female	18.5	6.5	8.2	2.1	14.3	3.4
Sierra Leone 2008	Male	38.6	22.5	9.9	4.6	23.6	7.9
	Female	34.3	18.7	10.5	3.9	18.8	6.3
Tanzania 2004-05	Male	46.8	19.6	3.9	1.3	17.5	3.9
	Female	41.7	15.5	3.0	0.5	15.2	3.5
Uganda 2006	Male	40.5	16.8	7.4	2.2	17.3	4.2
	Female	35.6	13.1	4.9	1.8	14.4	4.1
Zambia 2007	Male	48.4	23.6	5.6	1.9	16.7	3.2
	Female	42.4	18.4	4.8	2.1	12.6	2.6
Zimbabwe 2005-06	Male	37.8	15.1	7.2	2.5	14.0	3.4
	Female	31.4	12.7	6.6	2.5	12.4	2.8

Continued...

Table 2 (continued): Nutritional status of children by sex

Country and year of DHS	Sex	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
South/Southeast Asia							
Bangladesh 2007	Male	43.7	16.5	18.4	3.3	39.9	11.4
	Female	42.7	15.8	16.5	2.5	42.1	12.1
Cambodia 2005	Male	45.5	19.3	8.5	2.0	29.2	7.2
	Female	40.0	14.3	8.2	1.5	27.0	7.1
India 2005-06	Male	48.1	23.9	20.5	6.8	41.9	15.3
	Female	48.0	23.4	19.1	6.1	43.1	16.4
Indonesia 2007	Male	na	na	na	na	na	na
	Female	na	na	na	na	na	na
Nepal 2006	Male	49.0	19.5	12.9	3.1	37.5	10.1
	Female	49.6	20.8	12.3	2.2	39.7	11.2
Pakistan 2006-07	Male	na	na	na	na	na	na
	Female	na	na	na	na	na	na
Philippines 2008	Male	na	na	na	na	na	na
	Female	na	na	na	na	na	na
Latin America and the Caribbean							
Bolivia 2003	Male	33.3	11.6	1.8	0.7	5.5	1.3
	Female	31.3	10.5	1.5	0.5	5.2	1.1
Dominican Republic 2007	Male	10.7	2.6	2.3	1.0	2.9	0.3
	Female	8.8	2.0	2.0	0.5	3.4	0.3
Guatemala 2008-09 ^a	Male	50.5	21.9	1.4	0.5	13.9	2.0
	Female	49.0	20.5	1.4	0.6	12.4	2.1
Haiti 2005-06	Male	32.8	11.9	10.2	3.0	19.5	7.8
	Female	26.1	8.2	10.1	3.4	16.8	5.1
Honduras 2005-06	Male	31.5	10.5	1.5	0.3	8.6	1.3
	Female	28.3	8.7	1.1	0.2	8.1	1.3
Peru 2004-08 Continuous	Male	30.4	8.4	0.9	0.2	4.5	0.4
	Female	25.8	6.9	0.8	0.1	4.4	0.4

na = Data not available

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey.

The -2 SD columns include the children who are below -3 SD.

Table 3: Nutritional status of children by place of residence

Percentage of children under 5 years who stayed in the household the night before the interview classified as undernourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by place of residence, when compared with WHO Child Growth Standards, DHS Surveys 2003-2009

Country and year of DHS	Type of place of residence	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Sub-Saharan Africa							
Benin 2006	Urban	36.1	17.2	7.6	2.4	14.5	3.4
	Rural	46.9	25.2	8.8	3.1	20.5	5.8
Burkina Faso 2003	Urban	24.3	9.5	13.9	5.4	17.8	5.6
	Rural	46.3	25.5	22.3	10.0	35.6	15.3
Chad 2004	Urban	35.4	18.8	16.2	6.5	25.9	9.1
	Rural	46.9	28.1	15.9	6.2	34.4	14.3
Congo DR 2007	Urban	36.7	17.5	10.3	4.9	18.9	6.5
	Rural	51.5	28.7	9.9	3.9	29.3	9.7
Ethiopia 2005	Urban	33.0	13.6	8.7	3.2	17.3	4.8
	Rural	52.4	29.4	12.5	4.5	34.3	12.0
Ghana 2008	Urban	21.1	6.8	7.6	1.5	10.6	1.6
	Rural	32.3	11.7	9.1	2.6	16.0	4.1
Guinea 2005	Urban	27.8	9.3	9.4	3.4	14.4	4.0
	Rural	42.6	21.5	11.1	4.1	24.4	8.2
Kenya 2008-09	Urban	26.4	8.7	5.3	1.3	10.3	1.2
	Rural	37.1	15.3	7.0	2.0	17.3	4.1
Liberia 2007	Urban	30.6	14.1	8.7	4.0	17.2	5.5
	Rural	43.2	23.2	6.9	2.2	20.0	6.0
Madagascar 2003-04	Urban	45.3	21.6	14.2	4.4	30.6	9.3
	Rural	55.1	30.7	14.6	5.2	37.5	12.1
Malawi 2004	Urban	42.3	19.4	6.1	2.9	12.7	2.9
	Rural	53.9	27.8	6.0	2.8	18.0	4.5
Mali 2006	Urban	26.1	11.7	14.0	5.1	20.1	6.8
	Rural	42.1	22.1	15.7	6.2	29.3	10.9
Mozambique 2003	Urban	35.6	14.1	4.1	1.4	12.4	3.4
	Rural	51.7	26.9	5.6	2.0	22.7	7.6
Namibia 2006-07	Urban	23.8	7.6	5.6	1.4	11.5	2.1
	Rural	31.4	10.9	8.3	2.1	19.0	4.6
Niger 2006	Urban	35.3	16.4	10.1	2.7	23.1	7.0
	Rural	58.2	37.0	12.8	4.5	41.2	16.0
Nigeria 2008	Urban	31.3	15.6	11.0	5.3	15.8	5.0
	Rural	45.0	26.2	15.3	7.8	26.5	10.9
Rwanda 2005	Urban	37.9	15.7	4.5	1.2	11.8	3.3
	Rural	53.3	25.4	4.7	1.6	18.4	4.5
Senegal 2005	Urban	11.0	3.9	6.3	1.8	7.2	1.6
	Rural	24.2	8.7	9.7	2.2	17.9	4.6
Sierra Leone 2008	Urban	29.7	13.9	11.3	5.4	15.7	6.7
	Rural	38.9	23.0	9.8	3.8	23.1	7.2
Tanzania 2004-05	Urban	33.0	10.7	3.2	0.9	12.1	1.6
	Rural	47.0	19.2	3.5	0.9	17.4	4.2
Uganda 2006	Urban	25.5	8.3	6.8	3.0	10.6	2.5
	Rural	39.5	15.7	6.1	1.9	16.5	4.3
Zambia 2007	Urban	39.0	16.6	4.4	1.6	12.8	2.5
	Rural	47.9	22.7	5.5	2.1	15.3	3.0
Zimbabwe 2005-06	Urban	28.1	11.5	4.9	1.8	8.9	1.7
	Rural	36.7	14.6	7.6	2.7	14.6	3.5

Continued...

Table 3 (continued): Nutritional status of children by place of residence

Country and year of DHS	Type of place of residence	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
South/Southeast Asia							
Bangladesh 2007	Urban	36.4	12.5	14.4	2.7	33.4	8.5
	Rural	45.0	17.1	18.2	2.9	43.0	12.7
Cambodia 2005	Urban	35.3	12.7	9.1	2.2	27.5	6.8
	Rural	43.8	17.4	8.3	1.7	28.2	7.2
India 2005-06	Urban	39.6	17.6	16.9	5.7	32.7	10.8
	Rural	50.7	25.6	20.7	6.7	45.6	17.5
Indonesia 2007	Urban	na	na	na	na	na	na
	Rural	na	na	na	na	na	na
Nepal 2006	Urban	36.3	13.7	7.5	1.2	23.2	4.8
	Rural	51.1	21.0	13.3	2.8	40.7	11.4
Pakistan 2006-07	Urban	na	na	na	na	na	na
	Rural	na	na	na	na	na	na
Philippines 2008	Urban	na	na	na	na	na	na
	Rural	na	na	na	na	na	na
Latin America and the Caribbean							
Bolivia 2003	Urban	23.8	7.1	1.6	0.4	3.5	0.7
	Rural	43.5	16.3	1.8	0.8	7.8	1.8
Dominican Republic 2007	Urban	8.4	2.1	2.6	0.9	2.9	0.3
	Rural	12.5	2.5	1.5	0.4	3.5	0.3
Guatemala 2008-09 ^a	Urban	34.3	11.6	1.0	0.4	8.2	1.1
	Rural	58.6	26.7	1.6	0.6	15.9	2.6
Haiti 2005-06	Urban	19.0	5.0	8.0	2.5	13.2	3.6
	Rural	34.5	12.5	11.2	3.6	20.5	7.8
Honduras 2005-06	Urban	17.5	4.4	1.0	0.1	4.6	0.7
	Rural	38.3	13.1	1.5	0.3	10.8	1.7
Peru 2004-08 Continuous	Urban	15.6	2.7	0.8	0.1	2.3	0.1
	Rural	45.1	14.4	0.8	0.2	7.4	0.8

na = Data not available

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey.

The -2 SD columns include the children who are below -3 SD.

Table 4: Nutritional status of children by mother's education

Percentage of children under 5 years who stayed in the household the night before the interview classified as undernourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by mother's education, when compared with WHO Child Growth Standards, DHS Surveys 2003-2009

Country and year of DHS	Mother's level of education	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Sub-Saharan Africa							
Benin 2006	No education	46.7	25.1	9.0	3.2	20.5	5.8
	Primary	34.3	15.1	7.1	2.3	13.5	3.1
	Secondary	27.8	13.1	5.0	1.6	10.1	1.5
	Higher	13.8	8.7	1.3	1.3	2.5	0.0
Burkina Faso 2003	No education	45.4	24.9	21.8	9.7	34.7	14.8
	Primary	32.6	13.9	20.0	8.3	26.3	10.1
	Secondary	19.1	4.8	10.9	2.7	11.8	2.0
	Higher	13.6	3.8	10.4	5.2	13.3	4.0
Chad 2004	No education	48.0	29.3	17.7	7.0	36.4	15.7
	Primary	36.7	17.3	10.8	4.3	22.1	5.8
	Secondary	23.3	12.9	8.3	3.4	16.5	4.6
	Higher	13.2	1.5	4.8	0.0	2.2	0.0
Congo DR 2007	No education	50.7	30.7	10.6	5.1	28.7	11.6
	Primary	48.4	24.6	11.8	5.5	28.6	8.6
	Secondary	35.2	16.9	7.7	2.4	15.7	4.3
	Higher	(2.5)	(2.5)	(8.1)	(3.5)	(5.4)	(0.0)
Ethiopia 2005	No education	53.3	30.2	13.3	4.8	35.9	12.5
	Primary	45.1	22.6	9.8	3.4	26.4	7.7
	Secondary	30.1	10.8	3.3	0.1	11.0	2.1
	Higher	(18.3)	(5.0)	(13.4)	(0.2)	(7.1)	(0.0)
Ghana 2008	No education	30.0	12.2	11.5	3.6	17.3	3.8
	Primary	31.6	10.2	7.6	2.1	13.5	3.4
	Secondary	24.8	7.3	8.4	1.6	12.4	2.7
	Higher	17.9	5.7	5.0	1.2	6.5	0.6
Guinea 2005	No education	40.6	19.7	11.2	4.0	23.1	7.3
	Primary	30.3	12.0	11.4	4.7	17.5	8.3
	Secondary	20.5	12.2	9.8	3.3	14.0	8.5
	Higher	*	*	*	*	*	*
Kenya 2008-09	No education	38.6	17.3	14.9	5.2	28.0	7.5
	Primary	38.2	15.1	5.9	1.5	16.6	3.2
	Secondary	16.7	5.8	9.1	9.1	21.1	11.1
	Higher	27.0	8.8	3.7	0.9	7.6	1.5
Liberia 2007	No education	40.5	21.2	7.0	2.2	18.3	5.5
	Primary	38.8	19.3	8.4	3.0	20.5	6.2
	Secondary	29.3	13.1	7.8	3.9	14.1	3.9
	Higher	(8.5)	(4.7)	(2.5)	(2.5)	(2.5)	(2.5)
Madagascar 2003-04	No education	54.3	30.1	19.8	7.9	42.4	16.7
	Primary	55.9	30.5	14.0	4.5	37.2	11.3
	Secondary	43.9	20.9	11.5	4.0	24.8	6.2
	Higher	34.6	18.1	14.2	6.2	15.3	7.7
Malawi 2004	No education	56.0	29.9	7.0	3.5	21.1	6.3
	Primary	52.9	26.5	5.9	2.7	16.6	4.0
	Secondary	37.6	16.8	4.8	1.6	10.5	2.3
	Higher	*	*	*	*	*	*
Mali 2006	No education	39.6	20.3	15.5	6.2	28.0	10.4
	Primary	30.0	14.5	15.9	5.1	22.7	7.5
	Secondary	20.2	9.5	13.6	5.4	16.4	5.6
	Higher	(13.0)	(10.9)	(18.5)	(2.7)	(19.7)	(2.7)

Continued...

Table 4 (continued): Nutritional status of children by mother's education

Country and year of DHS	Mother's level of education	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Mozambique 2003	No education	54.0	26.7	7.3	1.8	27.1	13.2
	Primary	47.7	23.8	5.1	1.9	20.3	6.4
	Secondary	20.9	6.8	6.8	2.7	8.8	3.5
	Higher	*	*	*	*	*	*
Namibia 2006-07	No education	38.2	15.7	8.6	2.4	23.1	6.5
	Primary	36.6	13.4	9.4	2.7	20.9	5.1
	Secondary	24.6	7.5	6.9	1.7	13.2	2.3
	Higher	5.6	2.2	2.5	1.4	3.9	0.2
Niger 2006	No education	56.1	35.5	13.1	4.5	40.3	15.3
	Primary	50.8	26.0	12.3	4.6	33.7	12.7
	Secondary	25.6	9.3	9.9	1.6	12.9	3.7
	Higher	*	*	*	*	*	*
Nigeria 2008	No education	51.1	31.5	20.1	10.6	34.3	14.8
	Primary	40.3	21.4	11.2	5.1	19.4	6.6
	Secondary	28.8	13.3	8.4	4.1	12.3	3.6
	Higher	19.6	8.3	5.8	2.5	7.6	1.7
Rwanda 2005	No education	55.0	27.0	4.3	1.6	20.0	5.6
	Primary	50.3	23.9	4.6	1.5	17.1	4.1
	Secondary	51.9	20.4	6.3	1.9	18.8	4.2
	Higher	45.9	18.9	4.8	2.6	13.5	2.9
Senegal 2005	No education	21.9	8.0	9.7	2.2	16.7	4.2
	Primary	15.1	5.0	6.9	2.0	8.2	2.2
	Secondary	10.1	2.8	2.9	0.8	3.8	0.0
	Higher	(5.8)	(2.0)	(4.0)	(0.0)	(4.9)	(0.0)
Sierra Leone 2008	No education	37.9	21.2	10.8	4.6	23.2	8.1
	Primary	31.1	21.4	10.1	6.3	14.2	3.0
	Secondary	22.9	12.4	8.1	0.8	11.5	1.3
	Higher	(18.2)	(0.0)	(5.0)	(0.0)	(4.4)	(0.0)
Tanzania 2004-05	No education	36.4	20.6	10.2	4.2	21.1	7.1
	Primary	46.9	19.1	4.4	0.9	19.1	4.8
	Secondary	44.2	16.9	3.2	0.9	15.5	3.4
	Higher	28.2	9.4	2.7	1.3	11.4	0.7
Uganda 2006	No education	47.7	23.3	2.8	0.8	18.6	4.0
	Primary	41.4	15.8	6.6	2.4	20.6	5.9
	Secondary	39.4	15.5	6.2	2.2	15.6	3.9
	Higher	25.2	7.9	7.8	2.1	10.0	3.2
Zambia 2007	No education	43.0	20.6	3.4	0.3	17.5	3.8
	Primary	44.6	20.8	6.7	2.9	17.3	4.5
	Secondary	48.6	23.7	5.2	2.0	15.4	3.1
	Higher	38.6	15.4	4.9	1.6	10.3	1.7
Zimbabwe 2005-06	No education	45.4	18.4	2.3	1.3	17.5	1.7
	Primary	38.1	14.7	9.6	2.0	16.7	4.5
	Secondary	35.4	13.5	8.3	2.7	14.3	3.5
	Higher	33.4	13.0	6.0	2.3	11.5	2.5
South/Southeast Asia							
Bangladesh 2007	No education	51.3	22.5	19.3	2.9	46.9	15.6
	Primary	48.8	18.6	19.2	3.6	46.5	13.7
	Secondary	35.5	10.4	14.9	2.5	34.9	8.1
	Higher	20.7	5.1	13.8	1.6	20.4	6.1
Cambodia 2005	No education	52.2	23.2	9.6	2.6	32.6	9.9
	Primary	43.6	16.8	8.4	1.6	29.4	6.8
	Secondary	26.4	6.7	7.9	1.1	19.1	2.9
	Higher	*	*	*	*	*	*

Continued...

Table 4 (continued): Nutritional status of children by mother's education

Country and year of DHS	Mother's level of education	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
India 2005-06	No education	57.2	31.5	22.8	8.0	52.0	22.0
	Primary	48.5	22.8	19.7	5.7	42.5	14.6
	Secondary	38.0	14.6	16.4	4.8	32.0	8.6
	Higher	19.4	5.4	13.0	4.3	15.7	4.3
Indonesia 2007	No education	na	na	na	na	na	na
	Primary	na	na	na	na	na	na
	Secondary	na	na	na	na	na	na
	Higher	na	na	na	na	na	na
Nepal 2006	No education	57.7	26.1	14.6	3.2	46.6	13.9
	Primary	46.3	16.2	8.4	1.6	31.1	7.5
	Secondary	29.7	7.6	11.4	1.6	24.0	4.6
	Higher	16.0	5.2	7.9	3.9	11.3	2.6
Pakistan 2006-07	No education	na	na	na	na	na	na
	Primary	na	na	na	na	na	na
	Secondary	na	na	na	na	na	na
	Higher	na	na	na	na	na	na
Philippines 2008	No education	na	na	na	na	na	na
	Primary	na	na	na	na	na	na
	Secondary	na	na	na	na	na	na
	Higher	na	na	na	na	na	na
Latin America and the Caribbean							
Bolivia 2003	No education	52.1	20.7	1.3	0.7	8.9	1.4
	Primary	37.1	13.1	2.0	0.7	6.4	1.6
	Secondary	18.6	4.0	1.3	0.4	2.3	0.3
	Higher	(12.5)	(3.6)	(1.3)	(0.2)	(1.8)	(0.2)
Dominican Republic 2007	No education	13.8	3.6	2.0	1.2	4.3	0.7
	Primary	11.6	2.9	2.5	0.8	4.0	0.4
	Secondary	9.7	2.1	2.3	0.8	2.7	0.2
	Higher	4.7	1.0	1.5	0.9	1.4	0.2
Guatemala 2008-09 ^a	No education	69.3	35.9	1.6	0.8	19.9	3.5
	Primary	50.3	19.1	1.4	0.5	12.6	1.8
	Secondary	21.2	5.7	1.1	0.2	5.1	0.8
	Higher	14.0	3.7	0.6	0.6	2.1	0.5
Haiti 2005-06	No education	38.7	13.9	11.2	3.7	22.2	8.6
	Primary	29.7	10.2	9.9	2.9	18.2	6.3
	Secondary	13.4	2.8	10.1	3.0	11.7	3.0
	Higher	(0.0)	(0.0)	(5.2)	(2.3)	(2.3)	(0.0)
Honduras 2005-06	No education	53.9	23.3	2.0	0.4	17.4	3.5
	Primary	33.2	10.1	1.4	0.2	8.9	1.3
	Secondary	9.9	1.8	0.9	0.3	2.5	0.3
	Higher	3.6	0.5	0.6	0.0	0.8	0.0
Peru 2004-08 Continuous	No education	61.4	24.6	0.2	0.2	12.3	0.8
	Primary	43.6	13.8	0.9	0.2	7.2	0.8
	Secondary	20.4	3.7	1.0	0.2	2.6	0.2
	Higher	8.4	0.9	0.6	0.1	1.2	0.0

na = Data not available

* = Percentage not shown; based on fewer than 25 unweighted cases.

() = Percentage based on 25-49 unweighted cases.

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey.

The -2 SD columns include the children who are below -3 SD.

Table 5: Nutritional status of children by wealth quintile

Percentage of children under 5 years who stayed in the household the night before the interview classified as undernourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by wealth quintile, when compared with WHO Child Growth Standards, DHS Surveys 2003-2009

Country and year of DHS	Wealth quintile	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Sub-Saharan Africa							
Benin 2006	Lowest	49.5	28.2	10.5	4.3	25.1	7.6
	Second	48.3	26.5	7.5	2.3	20.6	5.0
	Middle	47.2	24.1	9.1	3.5	19.5	5.9
	Fourth	39.2	18.1	8.8	2.6	14.9	3.7
	Highest	28.8	13.1	5.3	1.4	10.3	2.0
Burkina Faso 2003	Lowest	50.3	31.7	21.3	8.6	38.1	17.4
	Second	45.9	25.4	23.5	10.6	35.6	15.3
	Middle	47.0	24.9	21.7	10.2	35.7	15.6
	Fourth	42.9	21.3	23.3	10.8	33.4	13.5
	Highest	25.7	10.0	14.2	5.7	19.3	6.1
Chad 2004	Lowest	54.6	34.2	18.5	6.6	44.2	18.7
	Second	44.4	26.6	15.5	6.0	29.6	11.6
	Middle	47.7	28.4	15.1	7.1	34.6	14.0
	Fourth	42.5	23.7	14.0	6.0	31.3	13.5
	Highest	34.8	18.9	17.1	5.9	25.1	9.1
Congo DR 2007	Lowest	46.6	26.0	10.3	4.1	26.6	9.1
	Second	48.7	25.6	12.1	7.2	29.4	10.0
	Middle	53.1	28.6	9.2	2.8	27.6	9.6
	Fourth	48.2	26.9	9.8	4.3	24.5	8.9
	Highest	25.8	10.1	8.7	3.3	14.9	3.4
Ethiopia 2005	Lowest	52.3	30.0	15.4	5.7	36.5	13.5
	Second	55.3	32.3	15.2	6.1	37.8	14.9
	Middle	52.3	30.2	12.0	4.3	32.8	11.1
	Fourth	51.4	25.7	8.7	2.3	29.8	9.1
	Highest	39.6	20.1	8.3	3.1	25.2	6.8
Ghana 2008	Lowest	35.1	13.9	9.4	2.8	19.2	4.1
	Second	34.1	12.4	10.1	2.3	17.4	4.2
	Middle	28.3	8.8	9.4	2.7	12.5	3.6
	Fourth	21.4	6.0	6.1	1.6	8.4	2.0
	Highest	14.4	5.3	6.6	1.0	8.6	0.8
Guinea 2005	Lowest	44.8	23.6	12.1	5.4	27.2	9.4
	Second	44.8	20.8	11.0	3.6	25.1	8.9
	Middle	40.8	21.1	10.1	3.7	21.1	7.6
	Fourth	34.8	15.1	11.2	3.4	19.8	5.1
	Highest	25.3	8.7	8.2	3.0	13.8	3.5
Kenya 2008-09	Lowest	44.4	18.8	11.3	3.8	24.9	7.0
	Second	39.2	18.6	6.0	1.1	17.3	4.4
	Middle	34.4	12.4	5.7	1.4	15.5	2.3
	Fourth	29.1	10.0	5.0	1.4	10.1	2.1
	Highest	24.5	8.3	3.8	1.0	8.8	0.7
Liberia 2007	Lowest	44.5	25.9	7.3	1.9	21.1	6.9
	Second	45.1	24.6	7.5	2.2	20.5	6.3
	Middle	39.8	20.3	9.5	4.0	22.1	6.7
	Fourth	34.6	15.4	5.1	2.2	16.1	5.1
	Highest	26.4	11.0	7.9	4.1	13.2	3.0
Madagascar 2003-04	Lowest	58.3	31.4	15.6	5.6	40.4	14.4
	Second	58.2	29.8	14.4	5.4	41.5	11.5
	Middle	53.2	32.0	14.8	5.3	39.5	14.1
	Fourth	48.4	26.0	14.4	4.0	30.0	9.8
	Highest	43.7	22.5	12.9	4.7	24.5	5.3

Continued...

Table 5 (continued): Nutritional status of children by wealth quintile

Country and year of DHS	Wealth quintile	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Malawi 2004	Lowest	58.0	33.7	7.0	3.7	23.5	6.7
	Second	57.0	30.4	6.0	2.7	18.5	4.2
	Middle	56.1	28.5	5.8	2.7	18.6	4.1
	Fourth	50.2	23.6	5.9	2.3	14.9	4.1
	Highest	37.5	14.8	5.0	2.6	9.6	2.2
Mali 2006	Lowest	44.2	23.3	15.7	5.7	30.8	11.4
	Second	42.6	23.1	15.2	6.3	28.8	11.4
	Middle	42.6	20.9	16.1	6.3	29.6	10.4
	Fourth	35.0	18.1	15.3	6.2	26.2	10.1
	Highest	22.1	9.7	13.4	4.7	17.0	4.8
Mozambique 2003	Lowest	53.8	30.6	7.4	2.7	26.1	10.2
	Second	53.5	27.2	5.2	1.7	22.9	6.9
	Middle	52.6	26.3	4.0	1.7	20.8	5.5
	Fourth	42.6	17.7	4.7	1.6	16.5	5.0
	Highest	25.8	8.5	3.6	1.2	7.6	2.1
Namibia 2006-07	Lowest	37.0	13.7	8.0	2.1	21.5	5.3
	Second	35.7	11.8	9.3	2.3	21.0	5.4
	Middle	27.9	9.4	8.5	2.2	16.0	3.7
	Fourth	24.0	7.9	6.1	1.3	12.7	1.7
	Highest	12.6	3.7	3.5	1.2	6.9	1.5
Niger 2006	Lowest	57.2	37.3	14.6	5.1	41.2	17.4
	Second	58.2	36.4	12.4	4.6	41.6	14.1
	Middle	57.4	35.4	15.1	5.2	43.2	17.9
	Fourth	58.9	39.1	10.3	3.7	39.9	16.4
	Highest	40.9	20.4	9.4	2.3	25.7	7.1
Nigeria 2008	Lowest	52.1	33.3	20.5	11.0	35.2	15.9
	Second	49.0	28.8	17.0	8.5	29.1	12.6
	Middle	41.8	23.2	11.8	5.9	22.4	7.6
	Fourth	33.6	16.2	9.8	4.3	16.6	4.8
	Highest	24.2	10.8	9.3	4.5	10.2	3.2
Rwanda 2005	Lowest	60.9	32.5	5.2	1.9	24.0	7.3
	Second	54.7	24.7	5.6	2.5	21.1	4.6
	Middle	51.4	23.0	4.7	0.8	15.9	4.3
	Fourth	51.1	24.8	3.7	1.4	17.2	3.8
	Highest	34.5	13.1	3.9	0.9	7.1	1.3
Senegal 2005	Lowest	30.6	12.9	9.9	2.7	21.4	5.8
	Second	23.1	7.2	10.3	1.5	18.7	4.4
	Middle	19.2	5.5	8.6	2.5	15.9	3.1
	Fourth	11.4	3.0	5.0	0.9	5.4	0.9
	Highest	7.9	4.0	7.6	2.3	4.6	2.2
Sierra Leone 2008	Lowest	36.5	22.6	11.6	4.1	21.8	7.0
	Second	43.6	26.2	9.0	3.7	25.7	7.7
	Middle	37.7	20.7	9.4	4.3	23.4	8.0
	Fourth	36.5	18.9	9.1	4.5	19.5	7.1
	Highest	22.7	11.2	12.6	4.8	11.8	4.6
Tanzania 2004-05	Lowest	50.2	23.1	4.0	1.5	19.2	4.9
	Second	49.6	21.1	4.4	0.8	20.2	4.9
	Middle	48.3	18.5	3.1	0.8	16.9	4.5
	Fourth	44.2	15.5	2.8	1.0	14.4	2.5
	Highest	22.7	5.5	2.8	0.4	8.9	0.4

Continued...

Table 5 (continued): Nutritional status of children by wealth quintile

Country and year of DHS	Wealth quintile	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Uganda 2006	Lowest	43.4	18.5	6.3	1.6	20.6	5.5
	Second	38.0	16.0	5.8	2.0	15.6	3.3
	Middle	44.4	17.3	6.8	2.6	17.0	4.2
	Fourth	37.6	13.7	6.0	2.4	16.5	6.1
	Highest	24.3	7.9	5.7	1.4	8.4	1.5
Zambia 2007	Lowest	48.0	21.9	6.4	2.7	15.7	2.4
	Second	50.9	25.2	5.5	2.2	15.5	3.6
	Middle	47.4	23.1	4.9	1.7	16.1	3.3
	Fourth	42.1	17.2	4.4	1.9	13.2	3.4
	Highest	33.2	14.0	4.0	1.1	10.7	1.2
Zimbabwe 2005-06	Lowest	37.4	16.0	7.6	2.5	16.3	3.7
	Second	38.8	14.7	7.7	2.5	16.3	3.0
	Middle	34.9	13.5	7.2	2.6	11.4	3.0
	Fourth	31.6	12.5	7.0	2.9	12.5	3.1
	Highest	26.3	11.2	3.9	1.8	6.3	2.0
South/Southeast Asia							
Bangladesh 2007	Lowest	54.0	23.2	20.8	3.8	50.5	15.1
	Second	50.7	20.4	17.8	2.8	45.9	15.8
	Middle	42.0	15.2	16.9	2.6	41.0	11.2
	Fourth	38.7	11.8	17.6	2.8	38.1	8.9
	Highest	26.3	7.6	13.2	2.0	26.0	6.5
Cambodia 2005	Lowest	52.1	23.9	10.7	2.2	34.6	10.7
	Second	48.5	19.4	10.2	2.1	32.3	8.5
	Middle	44.1	14.2	6.9	1.2	26.6	5.4
	Fourth	38.2	15.4	5.6	1.9	27.2	5.8
	Highest	24.4	7.1	7.2	1.3	15.8	3.7
India 2005-06	Lowest	59.9	34.2	25.0	8.7	56.6	24.9
	Second	54.3	27.9	22.0	6.7	49.2	19.4
	Middle	48.9	23.1	18.8	6.2	41.4	14.1
	Fourth	40.8	16.5	16.6	5.0	33.6	9.5
	Highest	25.3	8.2	12.7	4.2	19.7	4.9
Indonesia 2007	Lowest	na	na	na	na	na	na
	Second	na	na	na	na	na	na
	Middle	na	na	na	na	na	na
	Fourth	na	na	na	na	na	na
	Highest	na	na	na	na	na	na
Nepal 2006	Lowest	61.6	29.3	11.5	3.2	47.0	14.2
	Second	54.9	22.1	15.1	3.1	45.9	12.8
	Middle	50.4	20.2	15.2	2.6	41.7	12.5
	Fourth	39.8	14.0	12.8	2.5	31.0	7.8
	Highest	31.0	9.5	7.0	1.2	18.9	2.5
Pakistan 2006-07	Lowest	na	na	na	na	na	na
	Second	na	na	na	na	na	na
	Middle	na	na	na	na	na	na
	Fourth	na	na	na	na	na	na
	Highest	na	na	na	na	na	na
Philippines 2008	Lowest	na	na	na	na	na	na
	Second	na	na	na	na	na	na
	Middle	na	na	na	na	na	na
	Fourth	na	na	na	na	na	na
	Highest	na	na	na	na	na	na

Continued...

Table 5 (continued): Nutritional status of children by wealth quintile

Country and year of DHS	Wealth quintile	Height-for-age (Stunting)		Weight-for-height (Wasting)		Weight-for-age (Underweight)	
		Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
Latin America and the Caribbean							
Bolivia 2003	Lowest	48.7	19.3	2.0	1.0	9.3	2.4
	Second	42.0	15.7	1.8	0.9	7.1	1.6
	Middle	27.8	7.4	2.0	0.3	3.5	0.7
	Fourth	18.6	4.0	1.1	0.2	2.7	0.4
	Highest	8.5	2.2	1.1	0.4	1.2	0.0
Dominican Republic 2007	Lowest	15.8	4.2	2.0	0.3	5.3	0.7
	Second	10.8	2.4	2.4	0.9	3.6	0.4
	Middle	7.3	1.8	3.1	1.1	2.4	0.0
	Fourth	6.9	1.3	1.4	0.6	1.8	0.2
	Highest	4.7	0.6	1.8	1.0	1.2	0.0
Guatemala 2008-09 ^a	Lowest	70.2	36.8	1.4	0.3	20.8	3.9
	Second	59.7	24.0	1.4	0.8	14.3	1.8
	Middle	43.8	15.2	1.9	0.7	11.3	1.3
	Fourth	25.5	5.8	1.2	0.5	5.2	0.7
	Highest	14.1	3.3	0.7	0.3	3.2	0.9
Haiti 2005-06	Lowest	41.0	15.1	10.1	2.9	22.1	7.5
	Second	37.3	14.0	10.9	3.8	23.0	8.8
	Middle	33.6	11.5	12.6	3.8	21.1	8.4
	Fourth	18.1	3.9	9.9	2.9	13.0	3.5
	Highest	8.0	1.9	6.4	2.4	7.1	2.3
Honduras 2005-06	Lowest	50.4	19.5	2.1	0.3	16.2	2.8
	Second	38.7	12.5	1.0	0.2	10.0	1.3
	Middle	25.4	6.3	0.6	0.3	6.3	1.2
	Fourth	15.2	2.8	1.5	0.4	3.1	0.3
	Highest	6.7	1.2	0.8	0.0	1.7	0.1
Peru 2004-08 Continuous	Lowest	54.3	21.0	1.1	0.1	9.9	1.3
	Second	42.6	12.2	0.8	0.2	6.6	0.6
	Middle	24.1	4.0	1.0	0.3	3.9	0.1
	Fourth	11.4	1.8	0.4	0.0	0.7	0.0
	Highest	7.0	0.9	0.8	0.0	1.2	0.0

na = Data not available

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey. The -2 SD columns include the children who are below -3 SD.

Table 6: Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean Body Mass Index (BMI), and the percentage with specific BMI levels, DHS Surveys 2003-2009

Country and year of DHS	Height		Body Mass Index ^{1,2}				
	Mean height in centimeters	Percentage under 145 cm	Mean Body Mass Index (BMI)	Percentage Thin (<18.5)	Percentage Normal (18.5 - 24.9)	Percentage Overweight (25.0 - 29.9)	Percentage Obese (>=30.0)
Sub-Saharan Africa							
Benin 2006	158.7	1.4	22.6	9.2	71.8	13.2	5.8
Burkina Faso 2003	161.3	0.5	20.9	20.8	69.9	6.9	2.4
Chad 2004	162.3	0.3	20.7	22.1	70.9	5.4	1.7
Congo DR 2007	157.0	4.0	21.3	18.5	70.3	8.9	2.4
Ethiopia 2005	156.5	3.2	20.2	26.5	69.1	3.7	0.7
Ghana 2008	158.8	1.4	23.6	8.6	61.4	20.7	9.3
Guinea 2005	158.6	1.2	21.8	13.2	72.5	11.3	3.0
Kenya 2008-09	159.2	1.2	22.9	12.3	62.6	17.9	7.2
Liberia 2007	157.0	2.5	22.5	10.0	69.4	14.8	5.7
Madagascar 2003-04	153.3	6.5	20.8	19.2	73.6	6.2	1.0
Malawi 2004	155.8	3.1	22.0	9.2	77.1	11.2	2.4
Mali 2006	161.0	0.8	22.1	13.5	68.9	12.4	5.2
Mozambique 2003	155.2	4.9	22.1	8.6	77.3	10.3	3.9
Namibia 2006-07	160.6	1.0	23.2	15.9	56.0	16.4	11.7
Niger 2006	159.7	0.7	21.4	19.2	67.9	9.8	3.2
Nigeria 2008	157.9	3.0	22.6	12.2	65.7	16.1	6.0
Rwanda 2005	156.6	3.8	21.8	9.8	78.7	10.6	0.9
Senegal 2005	162.9	0.4	22.3	18.2	59.9	14.6	7.2
Sierra Leone 2008	na	na	na	na	na	na	na
Tanzania 2004-05	156.4	3.4	22.3	10.4	71.8	13.3	4.4
Uganda 2006	158.3	1.9	22.2	12.1	71.3	12.4	4.1
Zambia 2007	157.6	2.6	22.5	9.6	71.2	13.8	5.4
Zimbabwe 2005-06	159.9	0.7	23.1	9.2	65.8	17.8	7.2
South/Southeast Asia							
Bangladesh 2007	150.4	15.1	20.6	29.7	58.5	10.1	1.7
Cambodia 2005	152.4	7.7	20.9	20.3	70.1	8.4	1.2
India 2005-06	151.9	11.4	20.5	35.6	51.8	9.8	2.8
Indonesia 2007	na	na	na	na	na	na	na
Nepal 2006	150.9	14.1	20.6	24.4	67.0	7.6	0.9
Pakistan 2006-07	na	na	na	na	na	na	na
Philippines 2008	na	na	na	na	na	na	na
Latin America and the Caribbean							
Bolivia 2003	152.1	10.3	25.4	1.9	52.6	30.3	15.1
Dominican Republic 2007	na	na	na	na	na	na	na
Guatemala 2008-09 ^a	148.3	29.4	26.7	1.3	38.9	37.2	22.7
Haiti 2005-06	158.8	1.2	22.4	15.5	63.3	14.9	6.3
Honduras 2005-06	152.9	9.8	25.6	4.0	49.3	27.8	18.8
Peru 2004-08 Continuous	151.7	11.2	25.5	1.8	50.2	33.8	14.2

na = Data not available/comparable

¹ The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m²).

² Excludes pregnant women and women with a birth in the 2 months preceding the survey

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey.

Table 7: Anemia in children and women

Percentage of children age 6-59 months and percentage of women age 15-49 with anemia, DHS surveys 2003-2009

Country and year of DHS	Anemia cut-offs	Not pregnant women Pregnant women and children	Percentage with:			
			Any Anemia <12.0 g/dl	Mild 10.0-11.9 g/dl	Moderate 7.0-9.9 g/dl	Severe < 7.0 g/dl
Sub-Saharan Africa						
Benin 2006	Children		78.1	24.7	45.9	7.6
	Women		61.3	42.1	18.2	1.1
Burkina Faso 2003	Children		91.5	18.6	59.9	13.1
	Women		53.7	37.8	14.7	1.1
Chad 2004	Children		na	na	na	na
	Women		na	na	na	na
Congo DR 2007	Children		71.4	23.4	43.7	4.2
	Women		52.9	35.4	16.4	1.1
Ethiopia 2005	Children		53.5	21.4	28.3	3.9
	Women		26.6	17.4	7.9	1.3
Ghana 2008	Children		77.9	22.9	47.6	7.4
	Women		58.7	38.8	17.9	2.0
Guinea 2005	Children		76.6	23.2	46.7	6.7
	Women		53.3	35.3	16.5	1.5
Kenya 2008-09	Children		na	na	na	na
	Women		na	na	na	na
Liberia 2009 ^a	Children		62.7	28.9	32.6	1.2
	Women		na	na	na	na
Madagascar 2003-04	Children		68.9	34.8	31.0	3.0
	Women		46.0	34.6	8.5	2.9
Malawi 2004	Children		73.2	26.4	42.0	4.8
	Women		44.3	32.0	10.6	1.7
Mali 2006	Children		82.1	21.6	50.3	10.2
	Women		60.7	41.2	17.5	2.0
Mozambique 2003	Children		na	na	na	na
	Women		na	na	na	na
Namibia 2006-07	Children		na	na	na	na
	Women		na	na	na	na
Niger 2006	Children		83.9	20.5	56.3	7.1
	Women		45.8	31.8	12.5	1.5
Nigeria 2008	Children		na	na	na	na
	Women		na	na	na	na
Rwanda 2005	Children		56.3	20.4	27.3	8.5
	Women		32.8	19.2	10.9	2.7
Senegal 2005	Children		82.6	20.2	55.0	7.4
	Women		59.1	37.4	18.8	2.9
Sierra Leone 2008	Children		75.9	28.4	43.8	3.6
	Women		45.2	33.5	11.0	0.7
Tanzania 2004-05	Children		71.8	24.6	43.0	4.2
	Women		48.4	32.6	14.5	1.2
Uganda 2006	Children		72.6	22.4	43.4	6.8
	Women		41.9	30.6	10.7	0.6
Zambia 2007	Children		na	na	na	na
	Women		na	na	na	na
Zimbabwe 2005-06	Children		58.3	27.7	29.5	1.2
	Women		37.8	27.3	9.4	1.0

Continued...

Table 7 (continued): Anemia in children and women

Country and year of DHS	Anemia cut-offs	Not pregnant women	Percentage with:			
			Any Anemia <12.0 g/dl	Mild 10.0-11.9 g/dl	Moderate 7.0-9.9 g/dl	Severe < 7.0 g/dl
		Pregnant women and children	<11.0 g/dl	10.0-10.9 g/dl	7.0-9.9 g/dl	< 7.0 g/dl
South/Southeast Asia						
Bangladesh 2007	Children		na	na	na	na
	Women		na	na	na	na
Cambodia 2005	Children		61.9	29.0	32.1	0.7
	Women		46.7	35.4	10.2	1.0
India 2005-06	Children		69.5	26.3	40.2	2.9
	Women		55.3	38.6	15.0	1.8
Indonesia 2007	Children		na	na	na	na
	Women		na	na	na	na
Nepal 2006	Children		48.4	26.1	21.7	0.6
	Women		36.2	29.4	6.3	0.4
Pakistan 2006-07	Children		na	na	na	na
	Women		na	na	na	na
Philippines 2008	Children		na	na	na	na
	Women		na	na	na	na
Latin America and the Caribbean						
Bolivia 2003	Children		51.0	25.1	24.3	1.7
	Women		33.1	26.3	6.5	0.4
Dominican Republic 2007	Children		na	na	na	na
	Women		na	na	na	na
Guatemala 2008-09 ^b	Children		47.6	26.3	20.4	1.0
	Women		23.0	19.3	3.6	0.2
Haiti 2005-06	Children		60.7	24.0	34.4	2.3
	Women		45.8	30.9	12.8	2.1
Honduras 2005-06	Children		37.3	23.0	13.5	0.7
	Women		18.7	15.9	2.4	0.4
Peru 2004-08 Continuous	Children		43.2	23.8	18.7	0.7
	Women		26.7	22.6	3.8	0.3

Note: Anemia figures in the table are adjusted for altitude and smoking where applicable.

na = Data not available

^a Based on Liberia 2009 Malaria Indicator Survey

^b Figures are based on an ENSMI RHS survey and not a standard DHS survey.

Table 8: Early initiation of breastfeeding

Percentage of children under two years who were ever breastfed and the percentage of last born children, born in the two years preceding the survey, who were breastfed within 1 hour of birth, DHS Surveys 2003-2009

Country and year of DHS	Percentage of children ever breastfed	Percentage of children who started breastfeeding within 1 hour of birth
Sub-Saharan Africa		
Benin 2006	97.7	53.7
Burkina Faso 2003	98.9	32.3
Chad 2004	98.6	32.0
Congo DR 2007	97.5	48.2
Ethiopia 2005	96.8	64.0
Ghana 2008	98.6	49.8
Guinea 2005	97.7	37.8
Kenya 2008-09	96.9	53.4
Liberia 2007	96.9	63.5
Madagascar 2003-04	98.7	60.5
Malawi 2004	98.6	67.7
Mali 2006	97.1	44.1
Mozambique 2003	98.4	63.6
Namibia 2006-07	93.3	65.2
Niger 2006	98.4	46.1
Nigeria 2008	98.0	35.3
Rwanda 2005	97.9	60.8
Senegal 2005	97.9	22.2
Sierra Leone 2008	95.8	46.8
Tanzania 2004-05	96.2	57.0
Uganda 2006	98.4	39.6
Zambia 2007	97.9	53.4
Zimbabwe 2005-06	98.2	68.1
South/Southeast Asia		
Bangladesh 2007	98.7	42.1
Cambodia 2005	97.2	34.4
India 2005-06	96.8	22.2
Indonesia 2007	95.4	39.9
Nepal 2006	98.4	34.2
Pakistan 2006-07	93.8	24.1
Philippines 2008	89.9	45.7
Latin America and the Caribbean		
Bolivia 2003	97.5	58.0
Dominican Republic 2007	91.9	58.0
Guatemala 2008-09	na	na
Haiti 2005-06	97.4	41.3
Honduras 2005-06	95.8	73.1
Peru 2004-08 Continuous	98.5	52.2

na = Data not available

Table 9: Exclusive breastfeeding

Percentage of last born children under 6 months living with their mother who are exclusively breastfed, DHS surveys 2003-2009

Country and year of DHS	Exclusive breastfeeding under 6 months (0-5 months)
	Percent
Sub-Saharan Africa	
Benin 2006	43.1
Burkina Faso 2003	18.8
Chad 2004	2.0
Congo DR 2007	36.1
Ethiopia 2005	49.0
Ghana 2008	62.8
Guinea 2005	27.0
Kenya 2008-09	31.9
Liberia 2007	29.1
Madagascar 2003-04	67.2
Malawi 2004	52.8
Mali 2006	37.8
Mozambique 2003	30.0
Namibia 2006-07	23.9
Niger 2006	13.5
Nigeria 2008	13.1
Rwanda 2005	88.4
Senegal 2005	34.1
Sierra Leone 2008	11.2
Tanzania 2004-05	41.3
Uganda 2006	60.1
Zambia 2007	60.9
Zimbabwe 2005-06	22.2
South/Southeast Asia	
Bangladesh 2007	42.9
Cambodia 2005	60.0
India 2005-06	46.4
Indonesia 2007	32.4
Nepal 2006	53.0
Pakistan 2006-07	37.1
Philippines 2008	34.0
Latin America and the Caribbean	
Bolivia 2003	53.6
Dominican Republic 2007	7.8
Guatemala 2008-09 ^a	49.6
Haiti 2005-06	40.7
Honduras 2005-06	29.7
Peru 2004-08 Continuous	64.8

^a Figures are based on an ENSMI RHS survey and not a standard DHS survey.

Table 10: Minimum acceptable diet

Percentage of the last-born breastfed children 6-23 months living with their mother who consumed a minimum acceptable diet in the day or night preceding the survey. Percentage of last-born children, living with their mother: 12-15 months and 20-23 months who are currently breastfed, children 6-8 months who were given solid, semi-solid, or soft foods, children 6-23 months who consumed food from four or more food groups, and breastfed children 6-23 months who received solid, semi-solid, or soft foods the minimum number of times the day or night preceding the survey, DHS Surveys 2003-2009

Country and year of DHS	Minimum acceptable diet (Breastfed children 6-23 months) Percent	Continued breastfeeding at 1 year (12-15 months) Percent	Continued breastfeeding at 2 years (20-23 months) Percent	Introduction of solid, semi-solid, or soft foods (6-8 months) Percent	Minimum dietary diversity (Children 6-23 months) Percent	Minimum meal frequency (Breastfed children 6-23 months) Percent
Sub-Saharan Africa						
Benin 2006	14.5	96.0	57.3	60.6	27.5	49.6
Burkina Faso 2003	6.2	98.1	81.0	36.1	14.2	30.7
Chad 2004	na	91.5	65.8	na	33.5	na
Congo DR 2007	3.7	90.8	63.5	80.9	12.2	30.5
Ethiopia 2005	2.9	92.6	85.8	46.0	3.9	42.3
Ghana 2008	26.7	94.5	43.9	72.5	46.8	50.5
Guinea 2005	4.8	96.4	70.6	47.1	17.5	30.4
Kenya 2008-09	24.4	86.0	53.6	82.4	32.3	67.5
Liberia 2007	13.1	86.7	47.5	55.5	22.1	50.8
Madagascar 2003-04	25.2	90.9	64.1	77.6	31.4	75.9
Malawi 2004	21.7	97.7	80.3	82.9	40.2	49.4
Mali 2006	6.7	94.1	56.1	29.5	16.3	25.2
Mozambique 2003	9.4	94.4	64.7	82.5	24.5	37.8
Namibia 2006-07	15.7	68.5	28.4	82.9	31.5	48.5
Niger 2006	3.1	95.6	62.3	61.6	5.4	40.8
Nigeria 2008	22.4	85.4	32.3	68.8	38.9	55.3
Rwanda 2005	16.0	96.4	77.1	46.1	27.8	44.3
Senegal 2005	21.9	93.2	41.8	57.4	47.6	38.7
Sierra Leone 2008	16.2	81.9	50.2	64.7	32.9	42.2
Tanzania 2004-05	18.1	91.0	55.4	79.6	34.3	48.5
Uganda 2006	10.6	91.1	54.4	74.7	23.6	40.1
Zambia 2007	25.0	93.8	41.7	90.3	36.9	55.5
Zimbabwe 2005-06	12.7	89.9	28.4	91.5	21.6	55.2
South/Southeast Asia						
Bangladesh 2007	11.4	94.5	91.0	71.1	12.1	81.3
Cambodia 2005	21.7	89.9	54.2	81.4	29.0	71.7
India 2005-06	7.2	89.2	72.7	54.5	11.7	43.7
Indonesia 2007	42.2	79.9	50.3	87.3	64.9	67.0
Nepal 2006	29.3	97.5	95.0	69.7	31.3	82.4
Pakistan 2006-07	na	78.3	53.2	na	na	na
Philippines 2008	49.0	57.7	34.2	90.7	63.2	81.4
Latin America and the Caribbean						
Bolivia 2003	40.2	81.5	45.8	75.4	73.6	51.6
Dominican Republic 2007	43.4	33.6	12.0	81.1	73.2	57.0
Guatemala 2008-09	na	78.6	71.3	na	na	na
Haiti 2005-06	16.1	82.9	34.9	87.4	28.4	46.4
Honduras 2005-06	51.9	72.4	47.5	84.0	64.9	77.0
Peru 2004-08 Continuous	65.2	78.8	48.3	81.4	76.2	82.6

na = Data not collected

Minimum acceptable diet: Breastfed children who had at least the minimum dietary diversity and the minimum meal frequency

Minimum dietary diversity: 4 or more food groups (The food groups used for tabulation are: grains, roots and tubers; legumes and nuts; dairy products; flesh foods; eggs; vitamin-A rich fruits and vegetables; other fruits and vegetables)

Minimum meal frequency: 2 times for breastfed infants 6-8 months and 3 times for breastfed children 9-23 months

Table 11: Women's dietary diversity

Percentage of women age 15-49 with children less than 3 years of age living with them who consumed various food groups in the day or night preceding the survey, DHS Surveys 2005-2009

Country and year of DHS	Percentage of women consuming the food group									Mean number of food groups (0-9)
	Starchy staples	Legumes and nuts	Dairy	Meat		Eggs	Dark green leafy vegetables	Vitamin A-rich fruits and vegetables	Other fruits and vegetables	
				Organs meat	Any other meat					
Sub-Saharan Africa										
Ethiopia 2005	87.8	48.9	23.2	2.5	11.2	3.8	26.0	8.4	5.9	2.2
Ghana 2008	96.7	26.4	21.1	10.9	82.9	21.6	51.7	24.4	64.8	4.0
Liberia 2007	94.6	22.1	13.5	16.4	74.4	19.6	51.2	31.5	22.9	3.5
Namibia 2006-07	61.7	17.9	33.5	23.1	65.0	20.5	36.4	22.3	24.4	3.0
Nigeria 2008	87.6	41.3	37.1	14.6	63.5	17.7	56.9	30.1	33.2	3.8
Sierra Leone 2008	90.3	41.1	14.4	6.9	76.6	12.1	69.8	76.7	40.2	4.3
Uganda 2006	91.2	67.9	23.8	1.2	28.7	3.6	41.6	19.6	12.1	2.9
Zambia 2007	55.3	43.0	15.4	10.0	62.7	14.0	73.6	32.0	32.0	3.4
Zimbabwe 2005-06	63.9	9.3	46.0	21.5	21.6	11.1	30.0	30.0	13.2	2.7
South/Southeast Asia										
Cambodia 2005	98.9	10.4	5.7	7.4	91.1	19.9	67.6	38.4	40.5	3.8
India 2005-06	na	51.2 ^a	35.8 ^a	na	5.9 ^a	2.9 ^a	62.1 ^a	na	9.7 ^a	na
Indonesia 2007	99.4	65.4	18.2	na	na	na	75.6	61.7	54.4	3.7
Nepal 2006	98.6	53.6	43.4	6.3	25.9	6.1	54.2	19.8	30.6	3.4
Philippines 2008	97.2	19.7	31.2	10.0	84.7	39.4	69.2	56.3	61.6	4.7
Latin America and the Caribbean										
Dominican Republic 2007	94.6	64.6	47.4	15.2	76.8	47.0	17.4	59.3	37.6	4.6
Haiti 2005-06	93.7	21.7	7.0	4.3	37.5	6.9	28.1	27.0	32.9	2.6
Honduras 2005-06	89.4	77.0	64.3	5.4	34.2	62.5	11.3	32.7	38.4	4.2

Notes: India 2005-06 and Indonesia 2007 DHS surveys included country-specific questions to collect information on women's dietary diversity.

Any other meat includes fish, chicken, pork, lamb, goat, and duck.

na = Data not collected or cannot be analyzed for this table

^a Women who reported that they consume any item from this food group daily

Table 12: Iron supplementation of children and pregnant women

Percentage of children age 6-59 months who received iron tablets/syrup/sprinkles in seven days preceding the survey and percentage of women age 15-49 with a birth in the five years preceding the survey who received any iron tablets or syrup during pregnancy for the most recent birth, percentage who took iron tablets/syrup for 90 or more days, DHS Surveys 2003-2009

Country and year of DHS	Percentage of children 6-59 months who received iron tablets/syrup/sprinkles in 7 days preceding the survey	Percentage of women who received any iron tablets/syrup during the most recent pregnancy	Percentage of women who took iron tablets/syrup for 90+ days
Sub-Saharan Africa			
Benin 2006	na	86.1	52.9
Burkina Faso 2003	na	69.3	10.3
Chad 2004	na	28.7	1.4
Congo DR 2007	na	46.3	1.7
Ethiopia 2005	na	10.4	0.1
Ghana 2008	27.5	86.5	41.5
Guinea 2005	na	75.0	32.6
Kenya 2008-09	4.8	68.7	2.5
Liberia 2007	17.0	86.5	13.6
Madagascar 2003-04	na	32.3	2.5
Malawi 2004	na	79.4	17.6
Mali 2006	na	60.8	18.2
Mozambique 2003	na	60.2	14.3
Namibia 2006-07	11.6	79.8	31.0
Niger 2006	na	45.3	14.0
Nigeria 2008	15.7	54.3	14.5
Rwanda 2005	na	28.2	0.5
Senegal 2005	na	90.5	39.7
Sierra Leone 2008	19.9	79.0	17.3
Tanzania 2004-05	na	61.1	9.8
Uganda 2006	5.5	63.1	0.7
Zambia 2007	na	90.4	43.6
Zimbabwe 2005-06	na	42.9	4.7
South/Southeast Asia			
Bangladesh 2007	na	54.8	na
Cambodia 2005	1.2	62.8	17.6
India 2005-06	4.7	65.1	23.1
Indonesia 2007	na	77.3	29.2
Nepal 2006	na	59.3	28.8
Pakistan 2006-07	na	43.3	16.3
Philippines 2008	37.0	82.4	34.0
Latin America and the Caribbean			
Bolivia 2003	na	61.6	21.8
Dominican Republic 2007	30.0	92.8	72.1
Guatemala 2008-09	na	na	na
Haiti 2005-06	22.8	64.7	26.8
Honduras 2005-06	21.7	80.6	70.2
Peru 2004-08 Continuous	7.1	72.2	24.9

na = Data not available

Table 13: Vitamin A supplementation of children and post-partum women

Percentage of children age 6-59 months who received vitamin A supplements in the six months preceding the survey and the percentage of women age 15-49 years with a birth in the five years preceding the survey who received vitamin A supplementation within the first six to eight weeks after the most recent delivery, DHS surveys 2003-2009

Country and year of DHS	Percentage of children 6-59 months who received Vitamin A	Percentage of post-partum women who received Vitamin A
Sub-Saharan Africa		
Benin 2006	60.7	41.4
Burkina Faso 2003	33.4	16.4
Chad 2004	34.3	na
Congo DR 2007	54.6	29.3
Ethiopia 2005	45.8	20.6
Ghana 2008	55.8	60.4
Guinea 2005	68.4	32.8
Kenya 2008-09	30.3	45.8
Liberia 2007	43.0	61.5
Madagascar 2003-04	76.4	19.1
Malawi 2004	65.6	41.0
Mali 2006	72.0	41.2
Mozambique 2003	50.7	20.8
Namibia 2006-07	51.5	51.0
Niger 2006	69.7	22.2
Nigeria 2008	25.8	24.9
Rwanda 2005	84.1	33.5
Senegal 2005	75.5	27.3
Sierra Leone 2008	25.9	54.9
Tanzania 2004-05	47.6	20.1
Uganda 2006	36.4	32.7
Zambia 2007	63.0	44.7
Zimbabwe 2005-06	47.1	14.4
South/Southeast Asia		
Bangladesh 2007	83.5	19.5
Cambodia 2005	34.5	27.3
India 2005-06	18.1	na
Indonesia 2007	68.5	44.6
Nepal 2006	87.5	29.4
Pakistan 2006-07	60.2	20.4
Philippines 2008	75.9	45.6
Latin America and the Caribbean		
Bolivia 2003	62.3	30.7
Dominican Republic 2007	28.6	38.2
Guatemala 2008-09	na	na
Haiti 2005-06	28.7	29.0
Honduras 2005-06	48.7	51.2
Peru 2004-08 Continuous	5.4	13.5

na = Data not available

Information on the vitamin A supplements received by children is based on mother's recall and vaccination card records.

Table 14: Household use of iodized salt

Percentage of households with salt tested for iodine levels that use salt containing 15 parts per million (ppm) or more of iodine, DHS surveys 2003-2009

Country and year of DHS	Percentage of households that used salt containing 15+ ppm iodine
Sub-Saharan Africa	
Benin 2006	54.5
Burkina Faso 2003	47.8
Chad 2004	65.9
Congo DR 2007	78.9
Ethiopia 2005	19.9
Ghana 2008	na
Guinea 2005	50.8
Kenya 2008-09	97.6
Liberia 2007	na
Madagascar 2003-04	75.4
Malawi 2004	na
Mali 2006	78.9
Mozambique 2003	53.7 ^a
Namibia 2006-07	na
Niger 2006	46.0
Nigeria 2008	51.5
Rwanda 2005	89.1
Senegal 2005	41.3
Sierra Leone 2008	58.2
Tanzania 2004-05	43.4
Uganda 2006	95.8
Zambia 2007	na
Zimbabwe 2005-06	na
South/Southeast Asia	
Bangladesh 2007	na
Cambodia 2005	72.5 ^a
India 2005-06	51.1
Indonesia 2007	na
Nepal 2006	na
Pakistan 2006-07	na
Philippines 2008	na
Latin America and the Caribbean	
Bolivia 2003	na
Dominican Republic 2007	na
Guatemala 2008-09	na
Haiti 2005-06	3.1
Honduras 2005-06	na
Peru 2004-08 Continuous	90.2

na = Data not available

^a Any iodine

Table 15: Deworming of children and pregnant women

Percentage of children age 6-59 months who received deworming medication in the six months preceding the survey and percentage of women age 15-49 with a birth in the past five years who took deworming medication during pregnancy for the last birth , DHS Surveys 2003-2009

Country and year of DHS	Percentage of children 6-59 months who received deworming medication	Percentage of women who received deworming medication during the most recent pregnancy
Sub-Saharan Africa		
Benin 2006	na	na
Burkina Faso 2003	na	na
Chad 2004	na	na
Congo DR 2007	3.6	na
Ethiopia 2005	na	4.0
Ghana 2008	41.9	34.9
Guinea 2005	na	na
Kenya 2008-09	37.5	17.0
Liberia 2007	45.3	28.5
Madagascar 2003-04	na	na
Malawi 2004	na	na
Mali 2006	na	na
Mozambique 2003	na	na
Namibia 2006-07	9.1	7.4
Niger 2006	na	na
Nigeria 2008	21.3	9.6
Rwanda 2005	na	na
Senegal 2005	na	na
Sierra Leone 2008	37.0	43.8
Tanzania 2004-05	na	na
Uganda 2006	41.9	26.8
Zambia 2007	60.0	36.0
Zimbabwe 2005-06	na	na
South/Southeast Asia		
Bangladesh 2007	na	na
Cambodia 2005	26.7	10.7
India 2005-06	11.9	3.8
Indonesia 2007	na	na
Nepal 2006	74.6	20.3
Pakistan 2006-07	na	na
Philippines 2008	38.0	3.8
Latin America and the Caribbean		
Bolivia 2003	na	na
Dominican Republic 2007	54.3	na
Guatemala 2008-09	na	na
Haiti 2005-06	21.3	6.9
Honduras 2005-06	52.5	6.9
Peru 2004-08 Continuous	20.9	2.3

na = Data not available

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