

Nutrition Situation Analysis Bangladesh

September 2014



World Food
Programme



World Health
Organization

Partnering as UN REACH

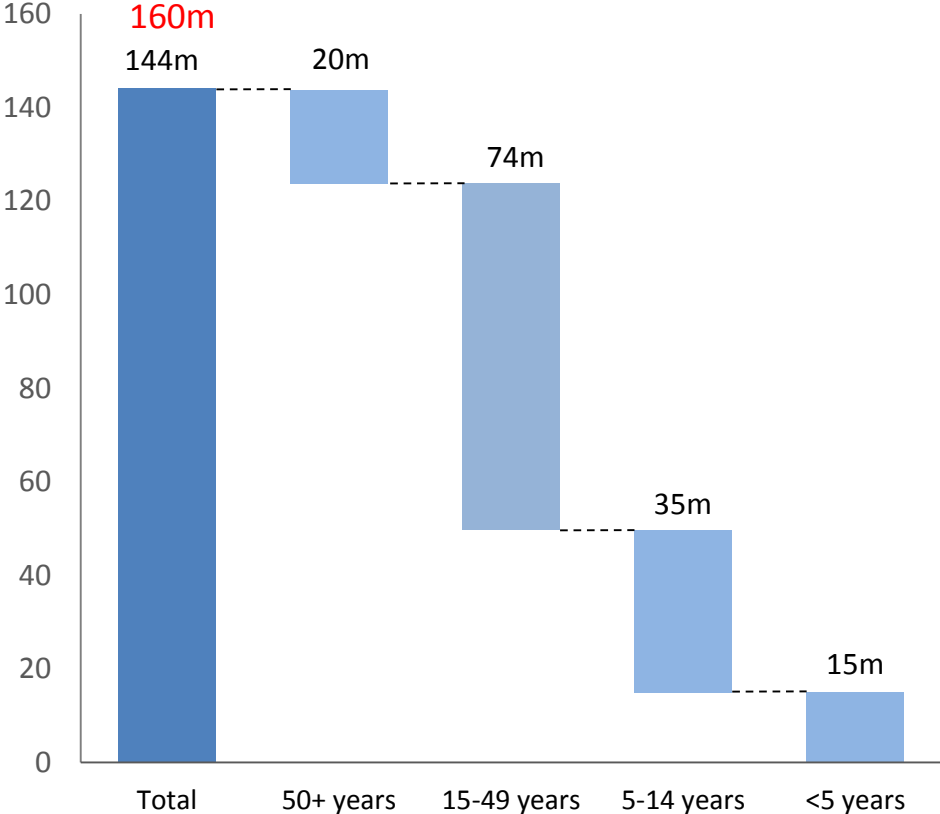
UNDERNUTRITION: CURRENT STATUS AND TRENDS

Stunting, wasting, underweight and micronutrient deficiency disorders

There are high rates and large absolute numbers of stunted, underweight and wasted children of under five years of age in Bangladesh.

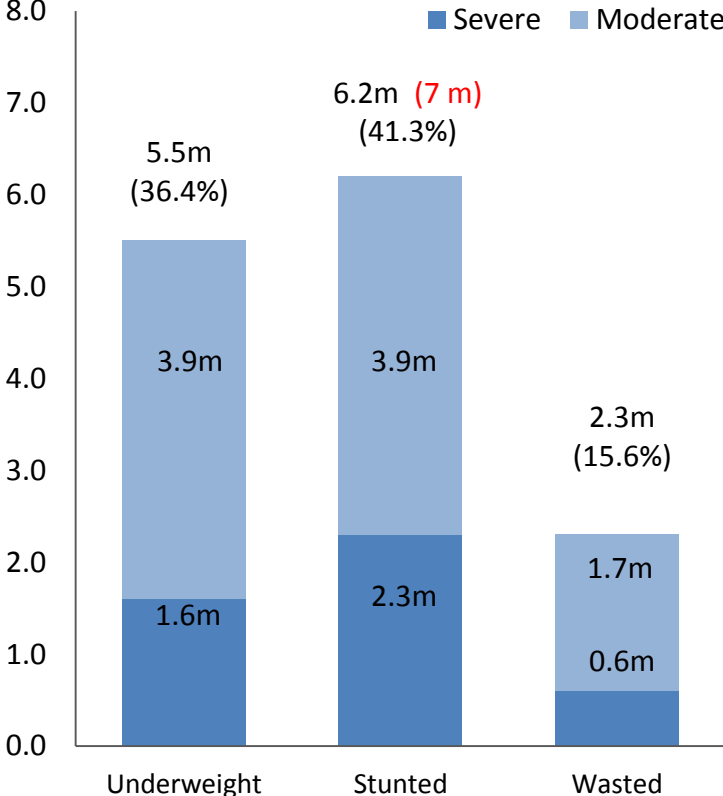
National demographic profile

Population in millions, *figures in red are current projections*



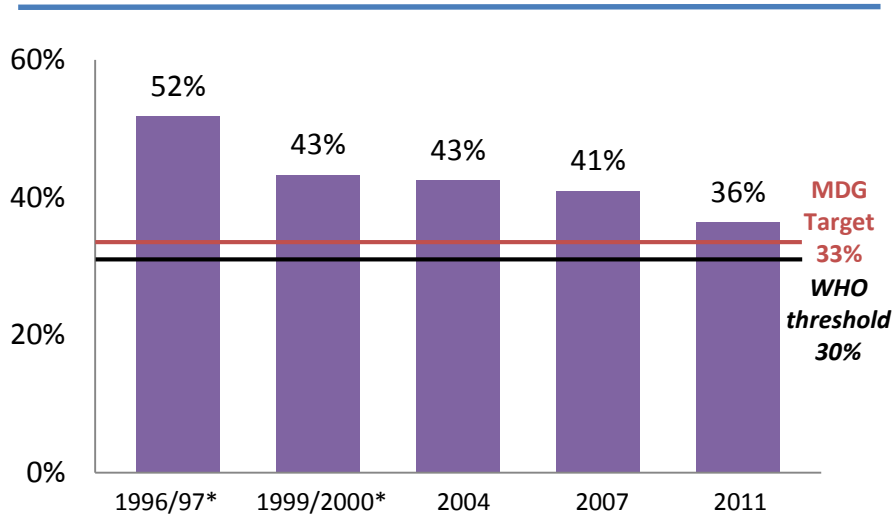
Undernutrition in children <5 years

Population in millions, *figures in red are current projections*

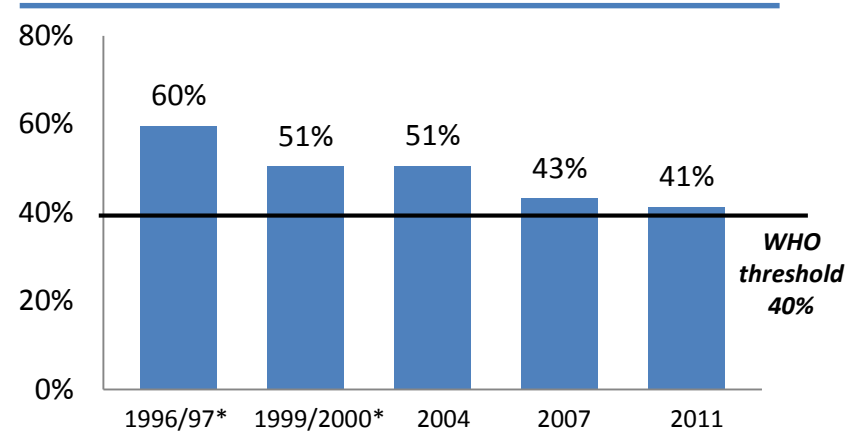


Levels of child undernutrition have been dropping in Bangladesh since 1996. However, challenges still remain to keep indicators below WHO public health 'critical' thresholds

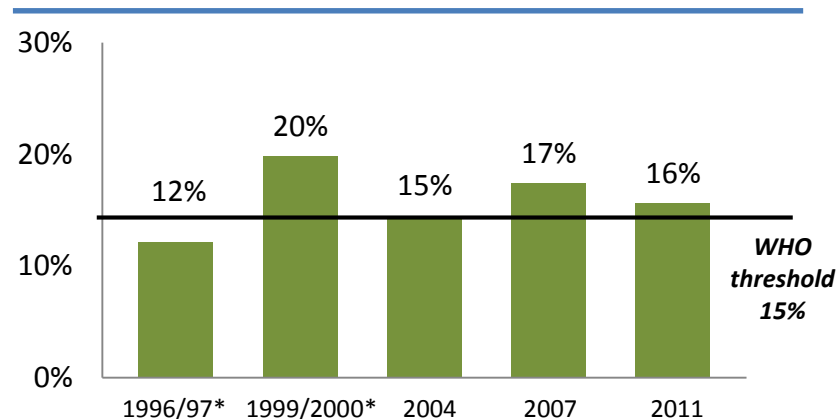
Underweight children <5 years



Stunted children <5 years



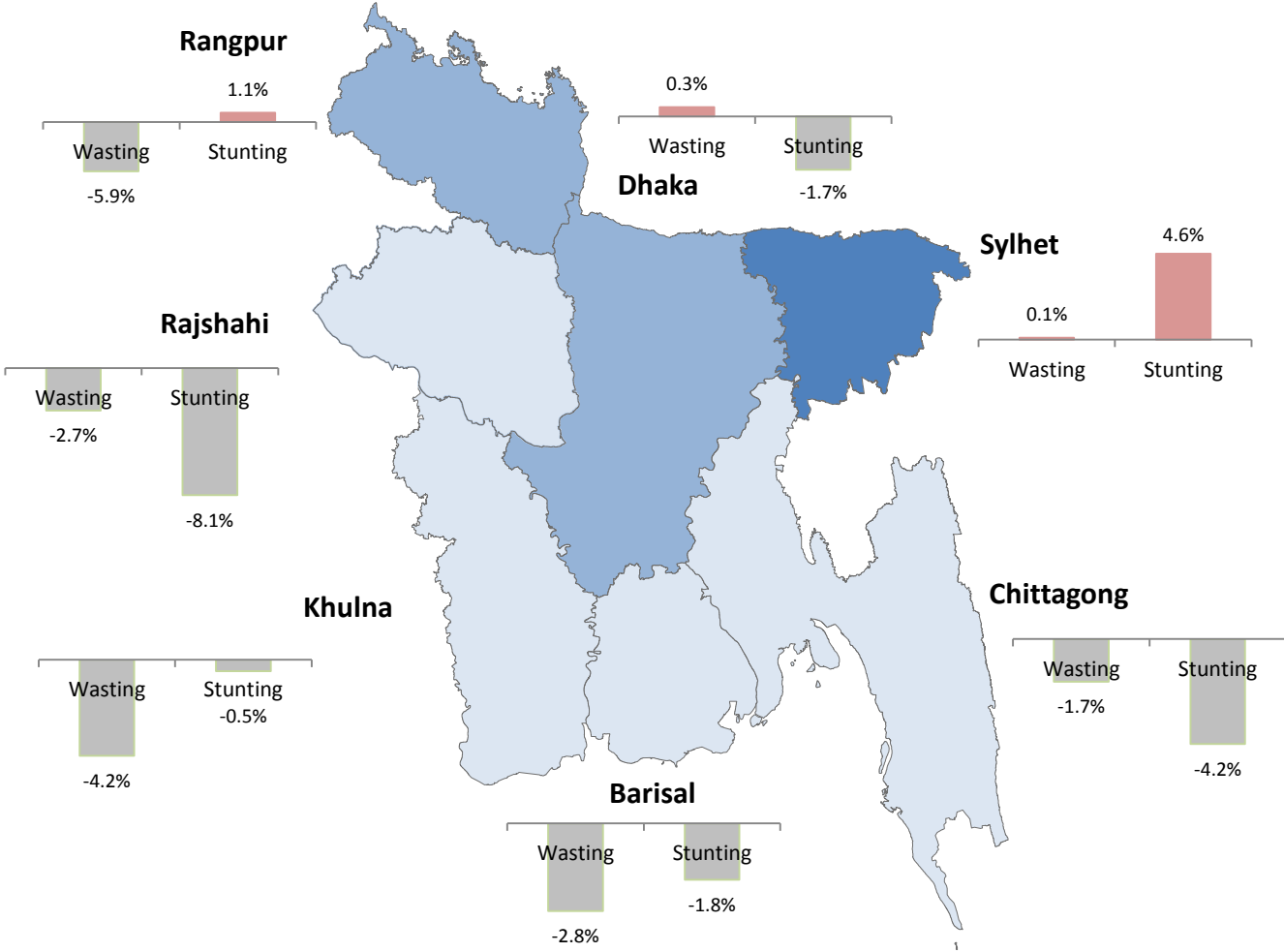
Wasted children <5 years



<5 years children (%)	BDHS 2011	MICS 2012-13	UESD 2013
Underweight	36.4	31.9	35.1
Stunting	41.3	42.0	38.7
Wasting	15.6	9.6	18.1

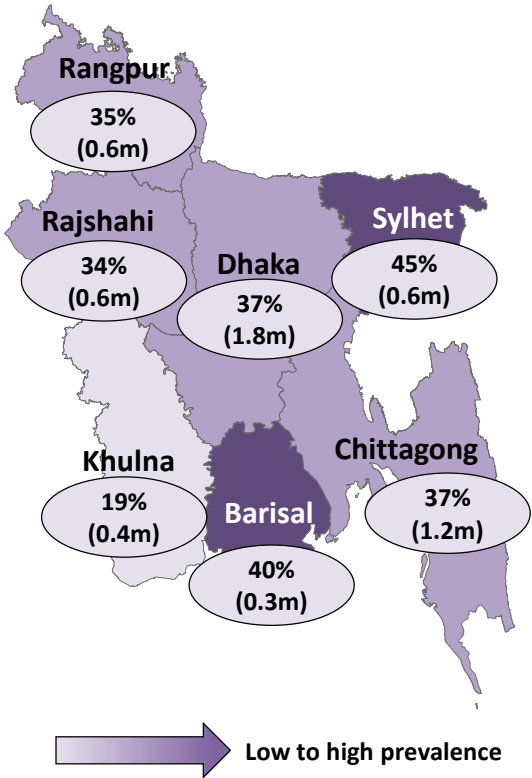
Graphs – BDHS 2011 (includes indicator data for 2004 and 2007), BDHS 1996/97, BDHS 1999/2000
 *For 1996/97 and 1999/2000, WHO Algorithm was applied to convert from NCHS to WHO standards
 Table – BDHS 2011, Multiple Indicator Cluster Survey (MICS) 2012-13
 Utilization of Essential Service Delivery (UESD) survey 2013

Overall, undernutrition rates have reduced between 2007 and 2011. However, wasting and stunting have worsened in some Divisions, particularly in Sylhet.

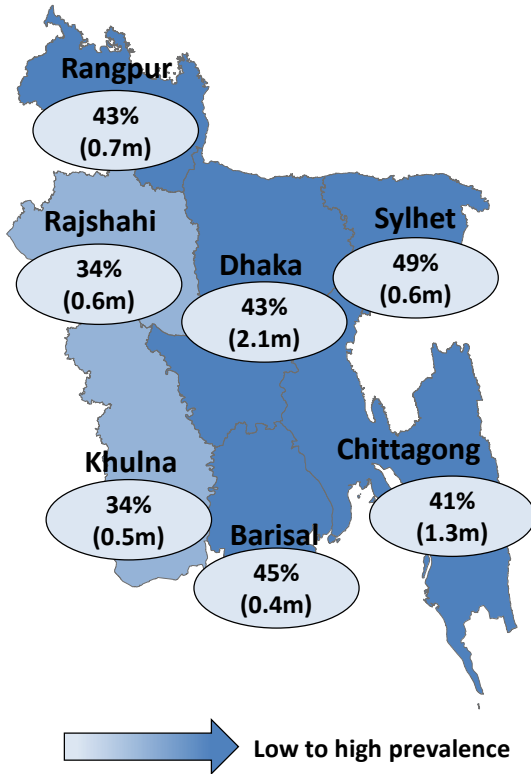


High levels of undernutrition are found throughout Bangladesh, with Sylhet the worst affected Division for all three indicators of undernutrition

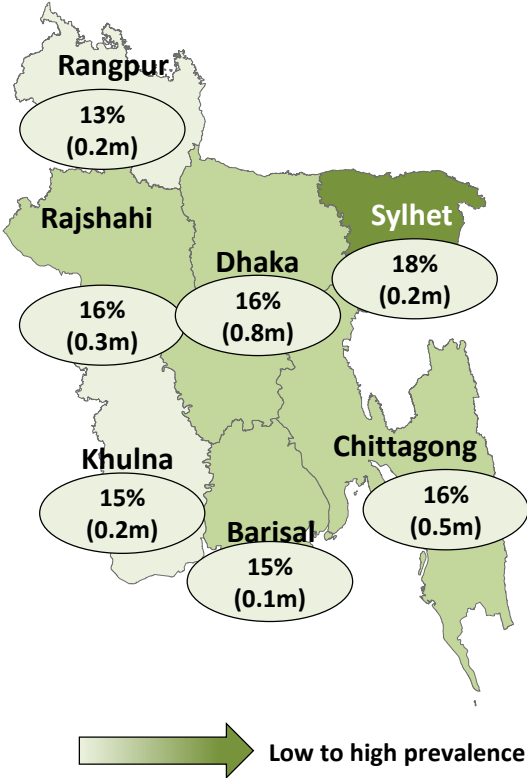
Underweight (0-59 months)



Stunting (0-59 months)



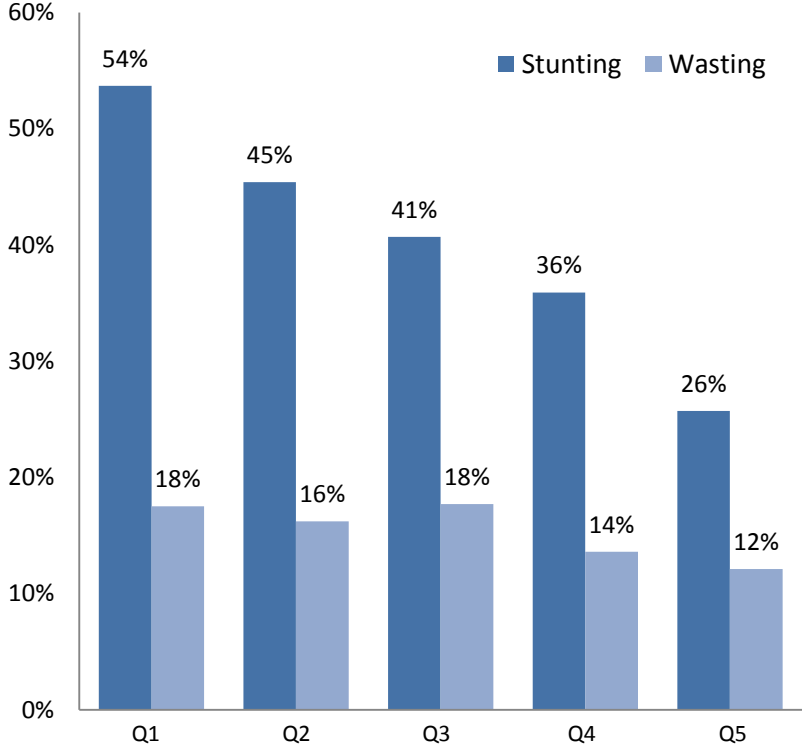
Wasting (0-59 months)



(*m) – number in millions
BDHS 2011

Over half of all children under 5 years old in the poorest household wealth quintile are stunted. The proportions of child stunting drops as household wealth increases.

Undernutrition in children under 5 years old by household wealth



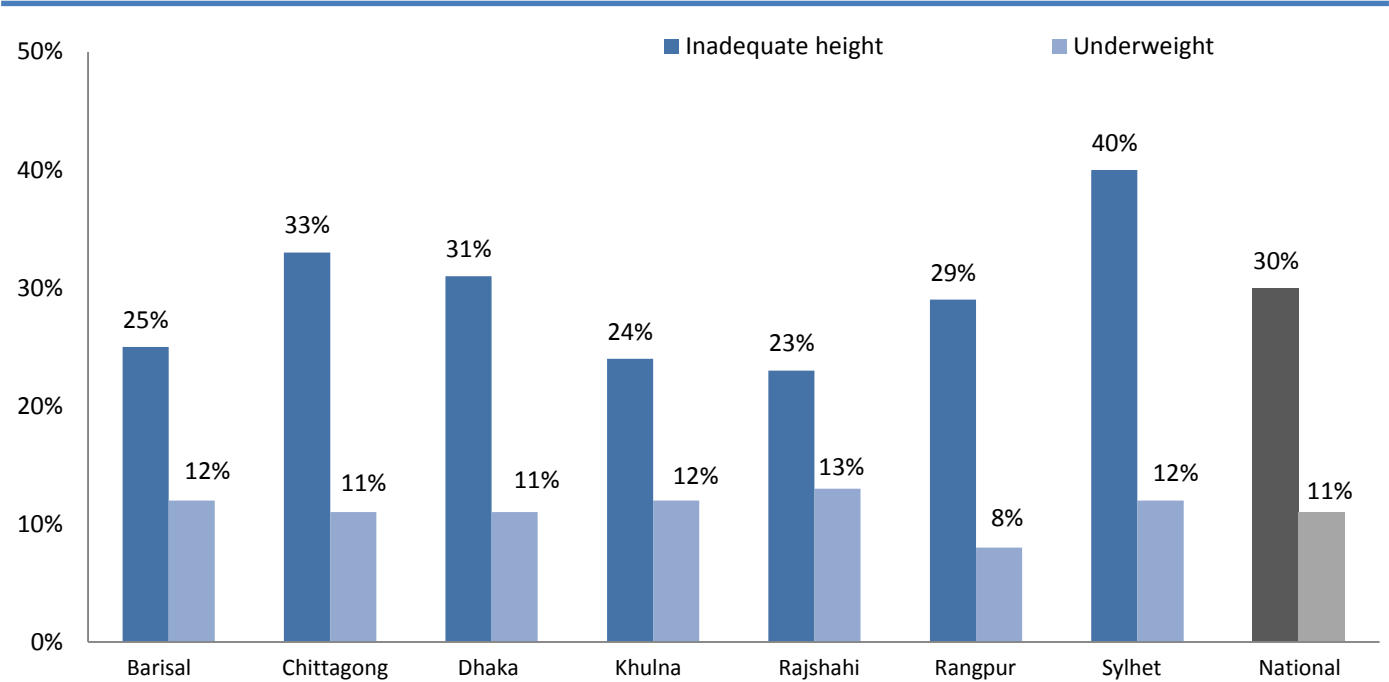
For assessing equity, household wealth indicators are commonly divided into quintiles. Quintile 1 refers to the lowest wealth quintile and quintile 5 refers to the richest.

Undernutrition is not restricted to the poorest families: 1 in every 4 children is stunted in the highest wealth quintile households

This demonstrates that overall economic growth and increasing household wealth are insufficient drivers of improved nutrition. Addressing poverty alone is insufficient for improving child undernutrition.

Undernutrition is also common among adolescent girls in Bangladesh, with similar regional variations.

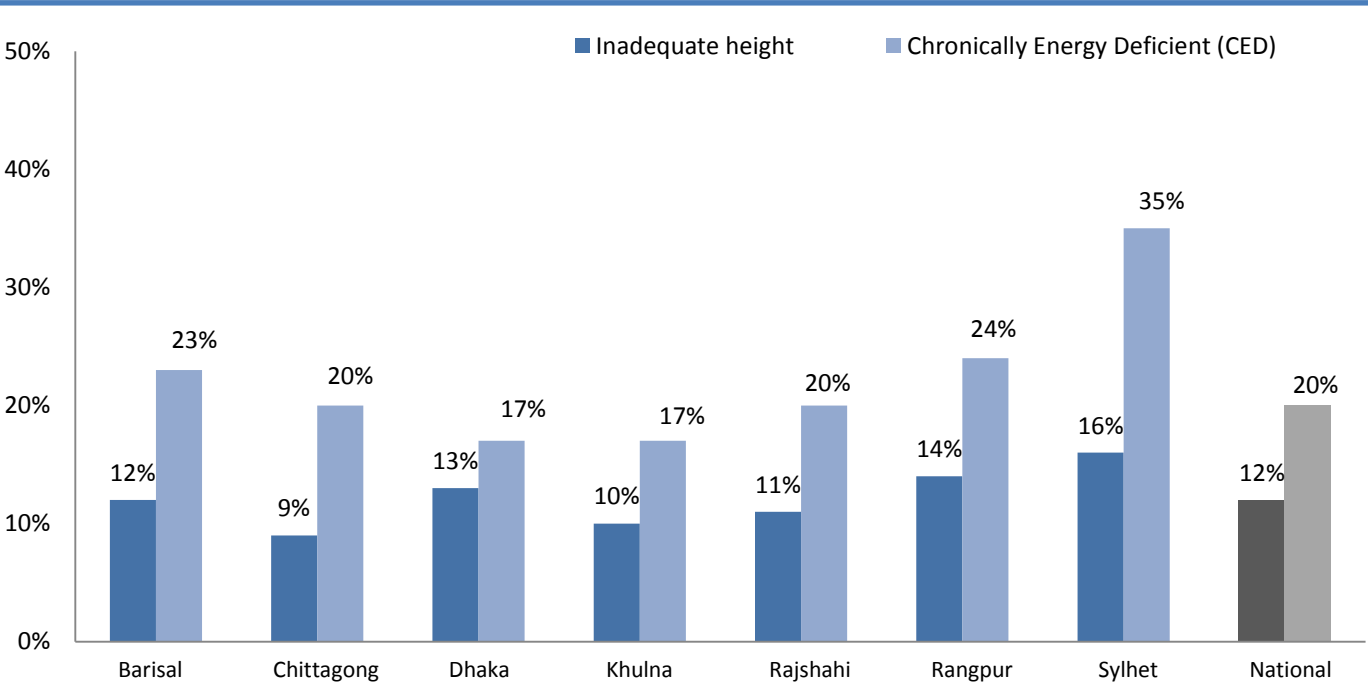
Undernutrition in adolescent girls (10-18 years)



Inadequate height: less than -2 S.D height for age z-score
Underweight: less than -2 S.D BMI (Body Mass Index - weight in kg/height m²) for age z-score
FSNSP 2012 report

Undernutrition is common among adult women across Bangladesh, with marked regional variations.

Undernutrition in adult women (19-49 years)



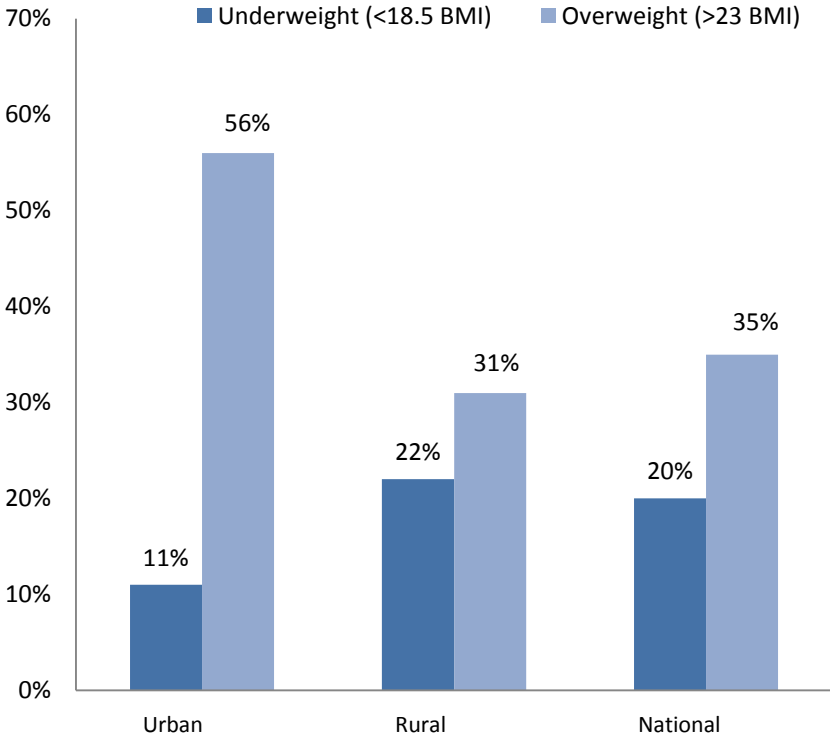
Inadequate height = shorter than 145cm

Chronically Energy Deficient (CED) = BMI (Body Mass Index - weight in kg/height m²) <18.5

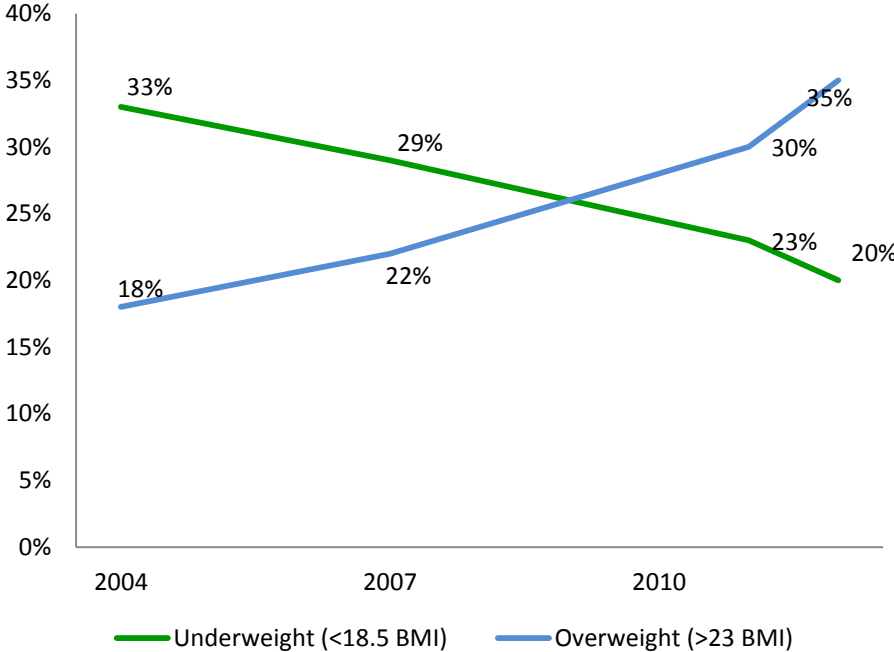
Food Security Nutritional Surveillance Project (FSNSP) 2012 report

Overweight in adult women is rising, especially in urban areas, but rural areas are also affected. The increase in percentage of overweight adult women is more than the decrease in underweight over the last decade.

Nutritional status in adult women by locality (19-49 years)



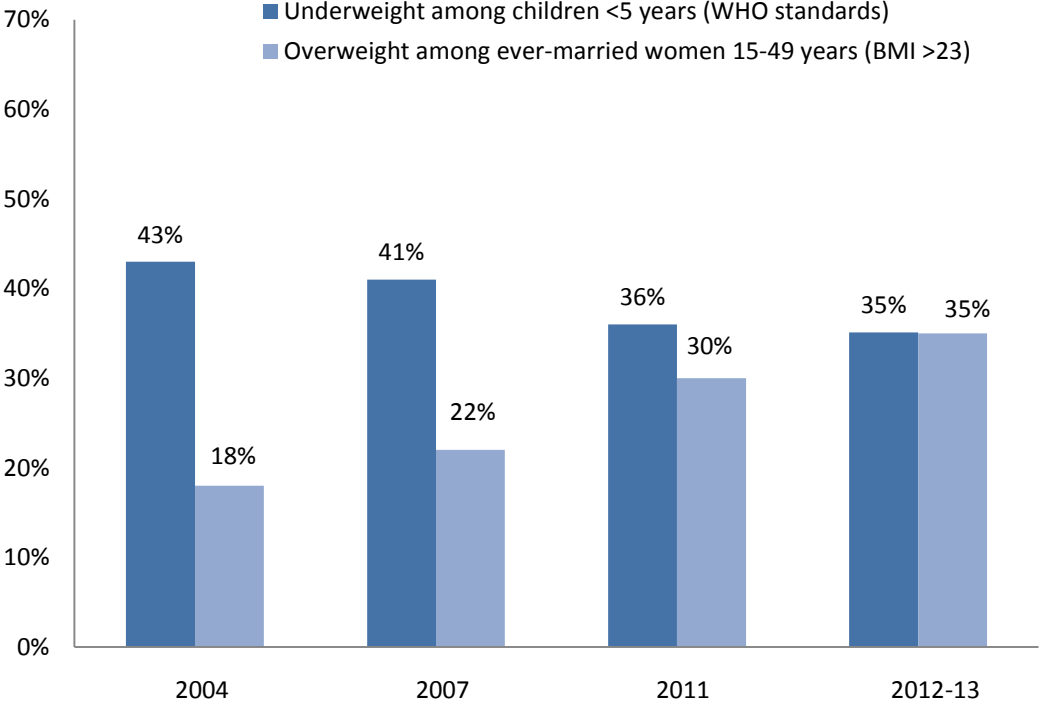
Diverging trends in nutritional status of adult women (19-49 years)



In BDHS 2011, the proportion of overweight women 15-49 years was 17% using the cut off BMI ≥ 25 .

Bangladesh has an increasing malnutrition double burden: a high proportion of underweight children under 5 years and a growing proportion of overweight women.

Overweight in women vs. underweight in children



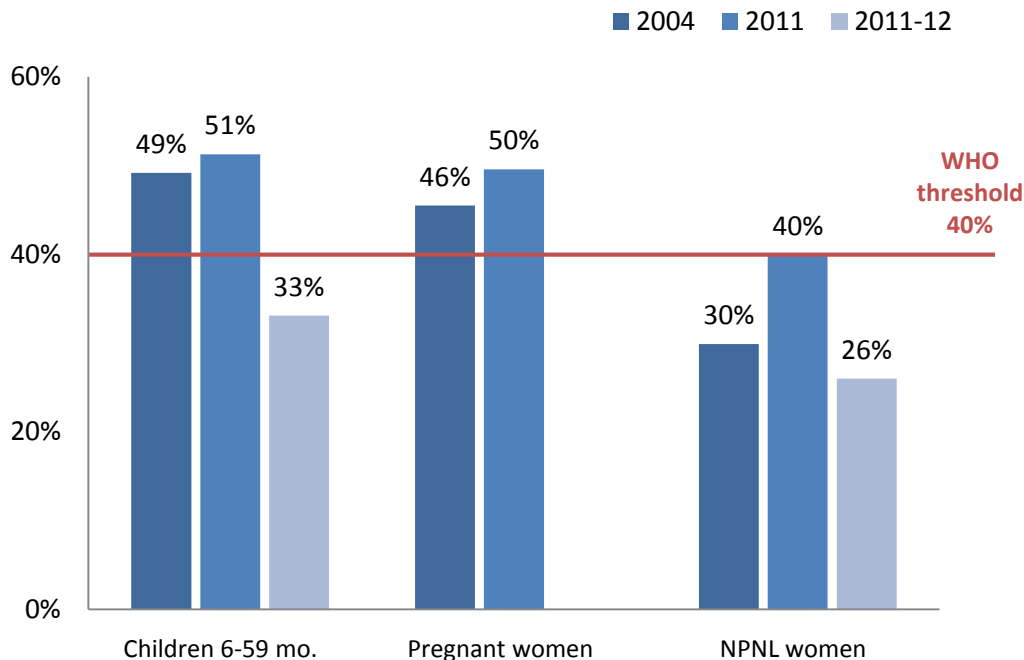
Most recent data reveals a new situation for overall nutrition in the country

The level of overweight among women has nearly doubled since 2004

The level of overweight among women now equals the level of underweight children

Although levels of anaemia dropped by 2013, one third of children aged 6-59 months are anaemic, representing an intergenerational threat to public health.

Anaemia



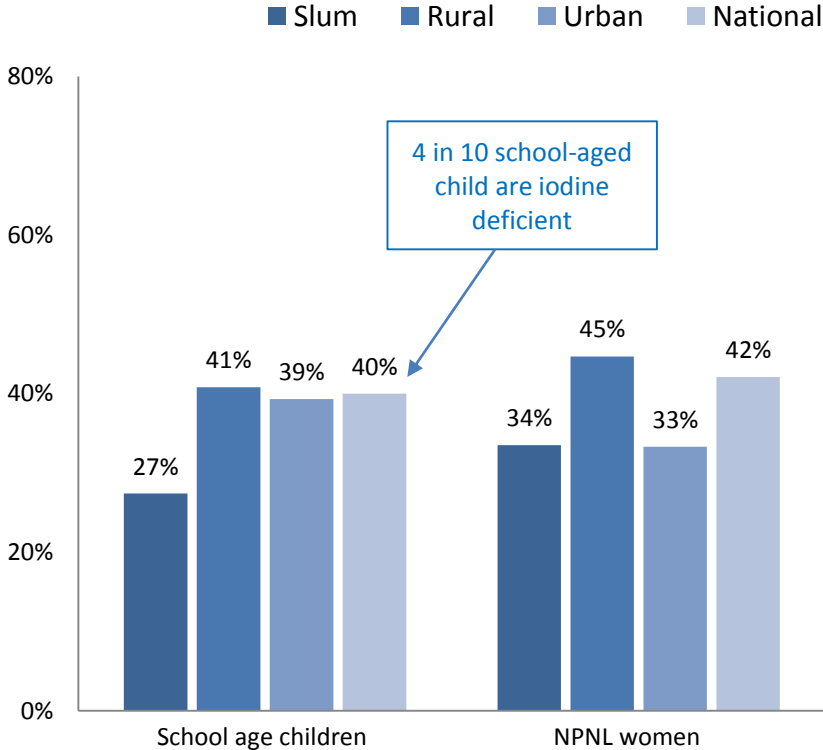
Consequences of anaemia:

- Reduced immunity
- Increased risk of maternal mortality
- Increased risk of perinatal mortality
- Intrauterine growth retardation
- Premature births
- Reduced cognitive development
- Reduced psychomotor development
- Reduced ability to concentrate
- Reduced scholastic performance
- Fatigue and reduced productivity
- Increased economic burden

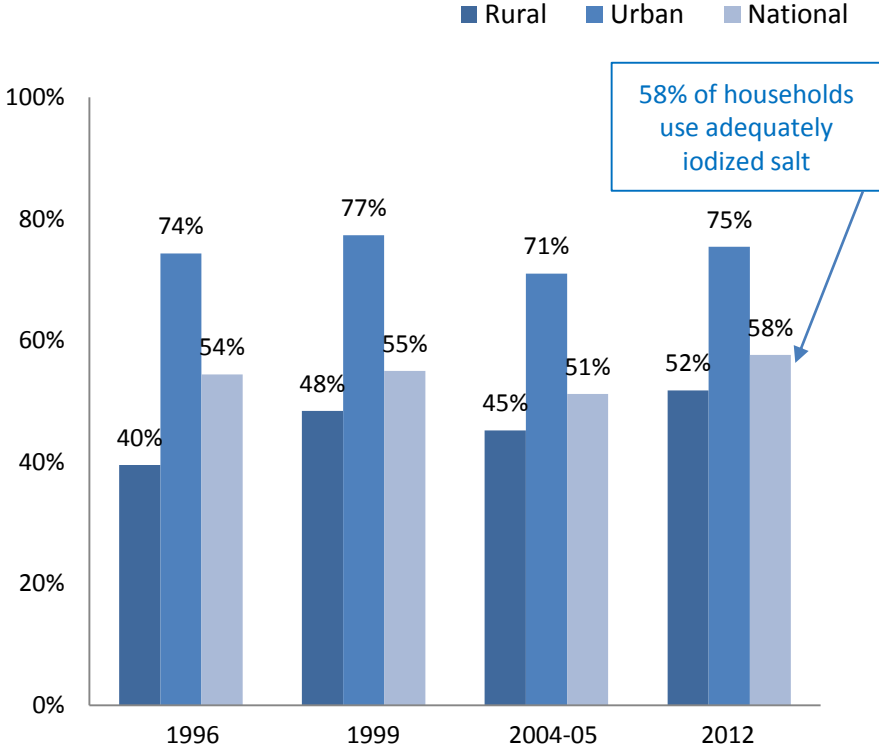
In NMSS 2011-12, anaemia rates due to Iron deficiency are 7.2% in children 6-59 months of age and 4.8% in NPNL women

Iodine deficiency remains a serious problem, with only 58% of households covered with adequately iodized salt despite mandatory Universal Salt Iodization.

Prevalence of Iodine Deficiency

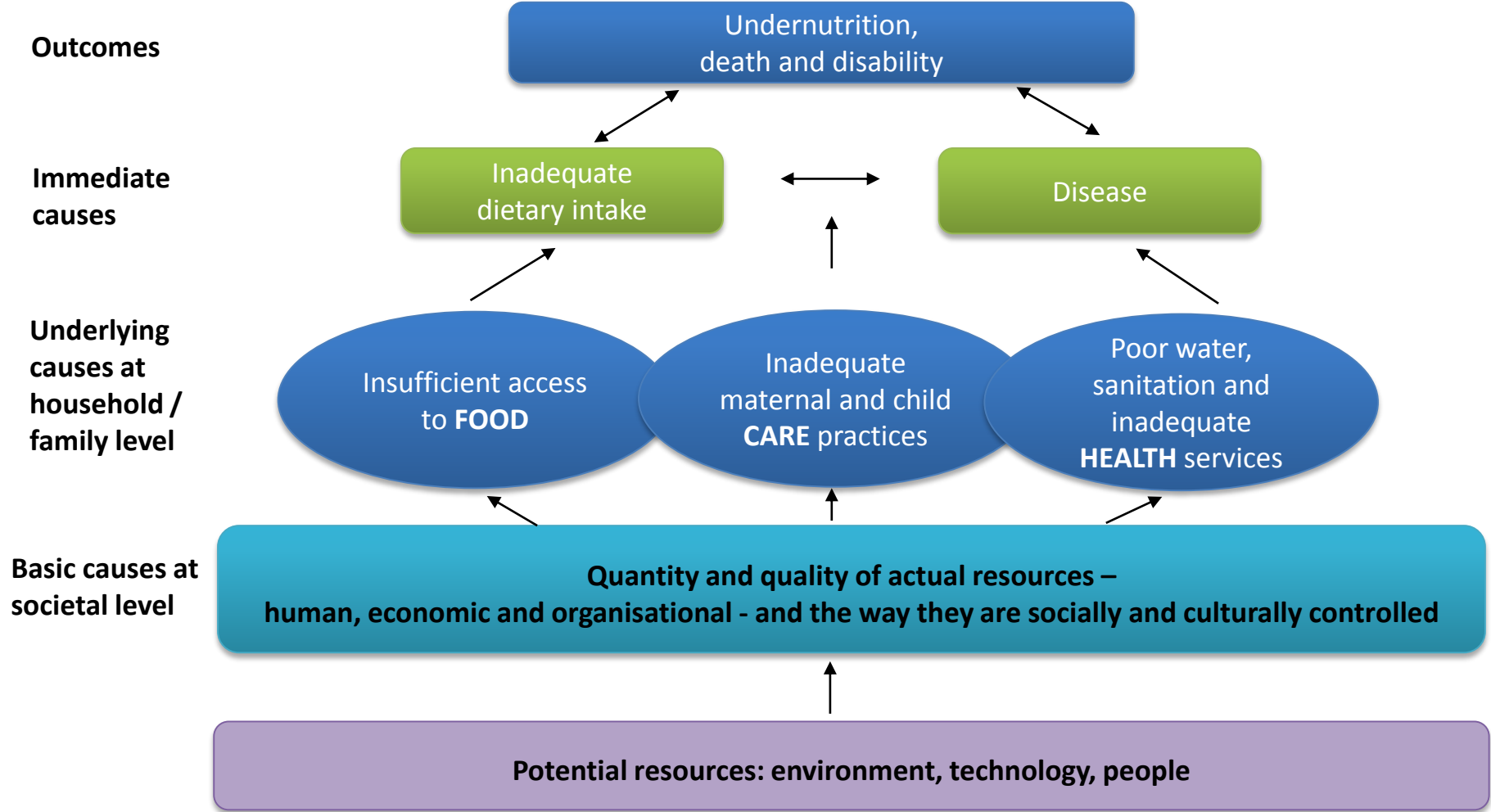


Coverage of households with adequately iodized salt



CAUSES OF UNDERNUTRITION

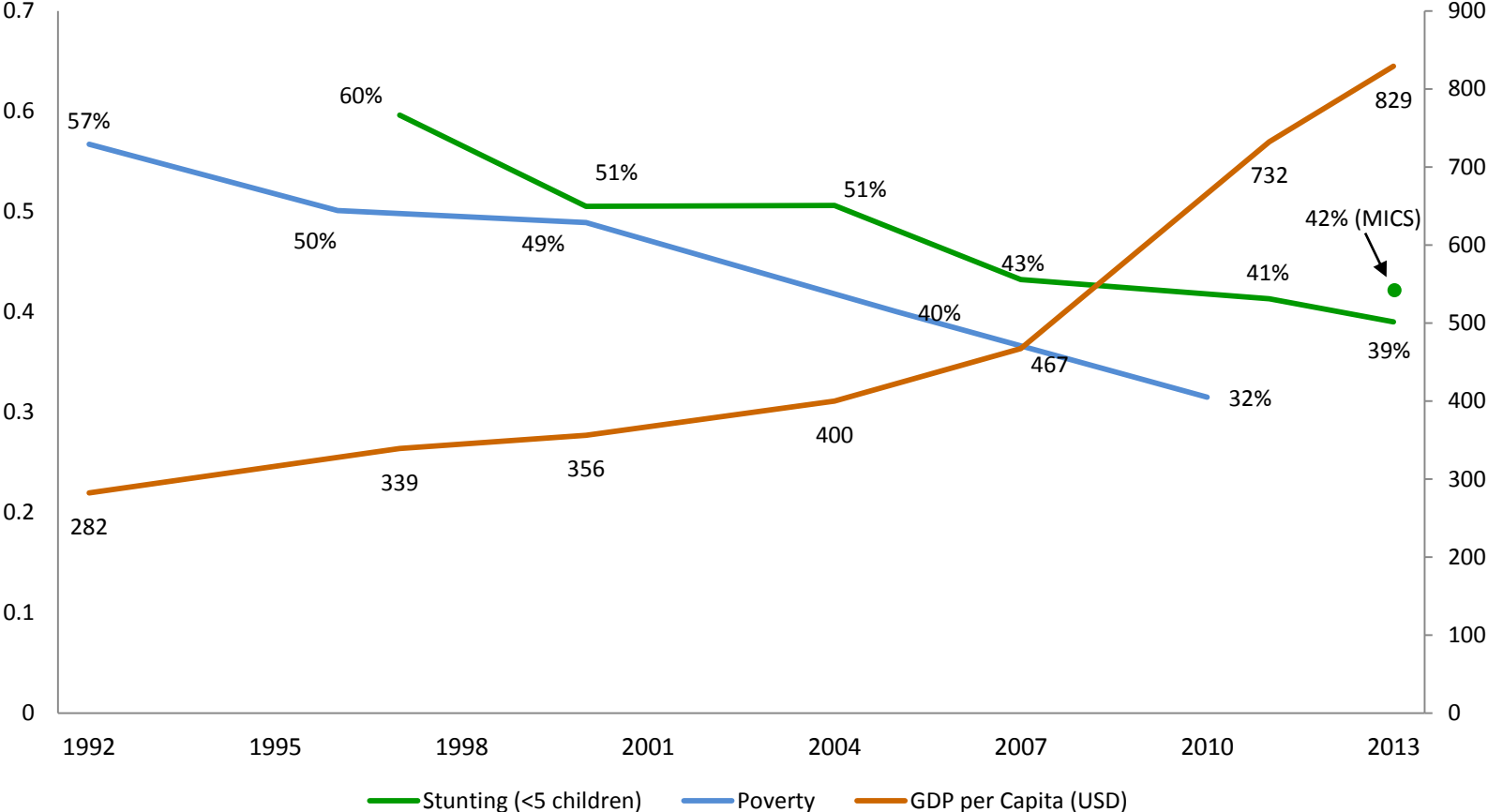
This nutrition analysis is grounded in the widely-accepted causal Conceptual Framework pioneered by UNICEF.



BASIC CAUSES

Poverty, education and child marriage

The decline in poverty and stunting are not as marked as the rapid increase in economic growth.

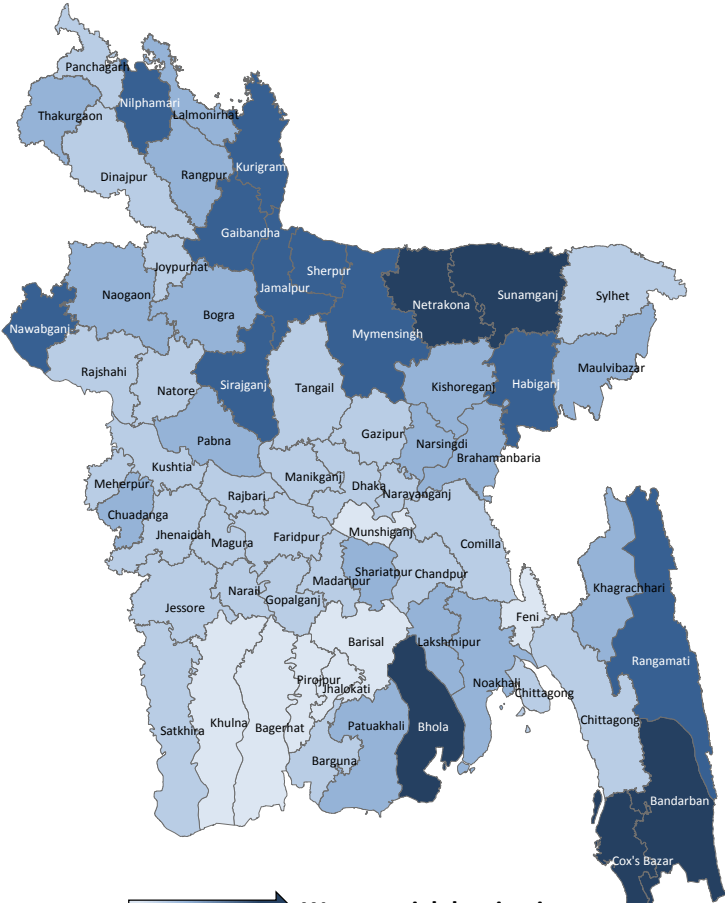
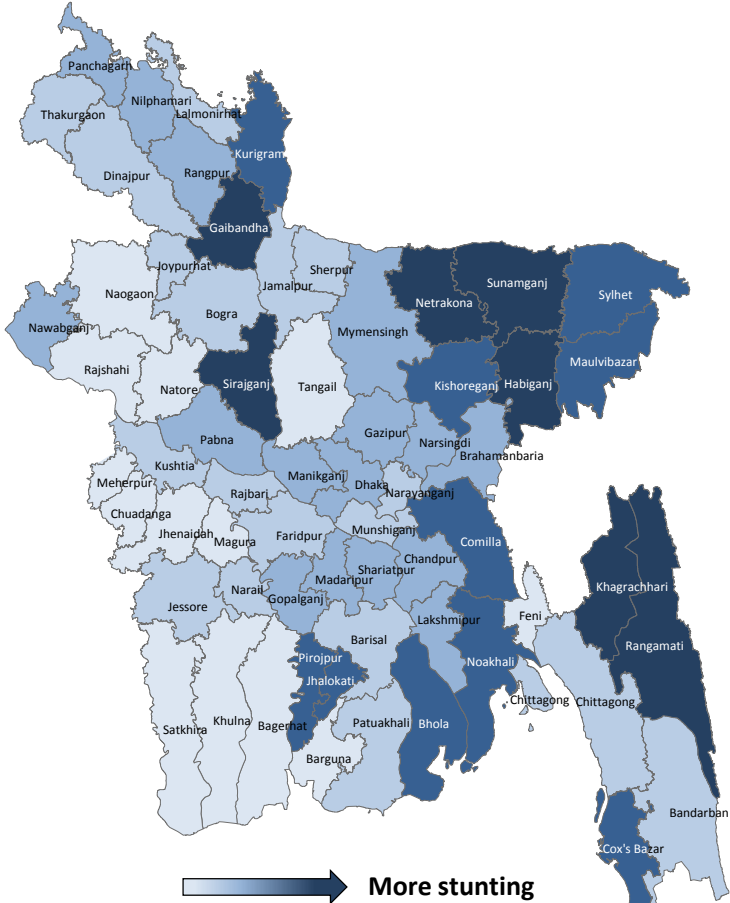


MICS 2012-13, UESD 2013, BDHS 2011, BDHS 1996/97, BDHS 1999/2000 (Stunting)
 GDP/Capita : Data from The World Bank (Poverty and GDP per Capita)

Inequity of social deprivation exists. The worst affected areas are north-eastern haors and south-eastern hills for both social deprivation and stunting.

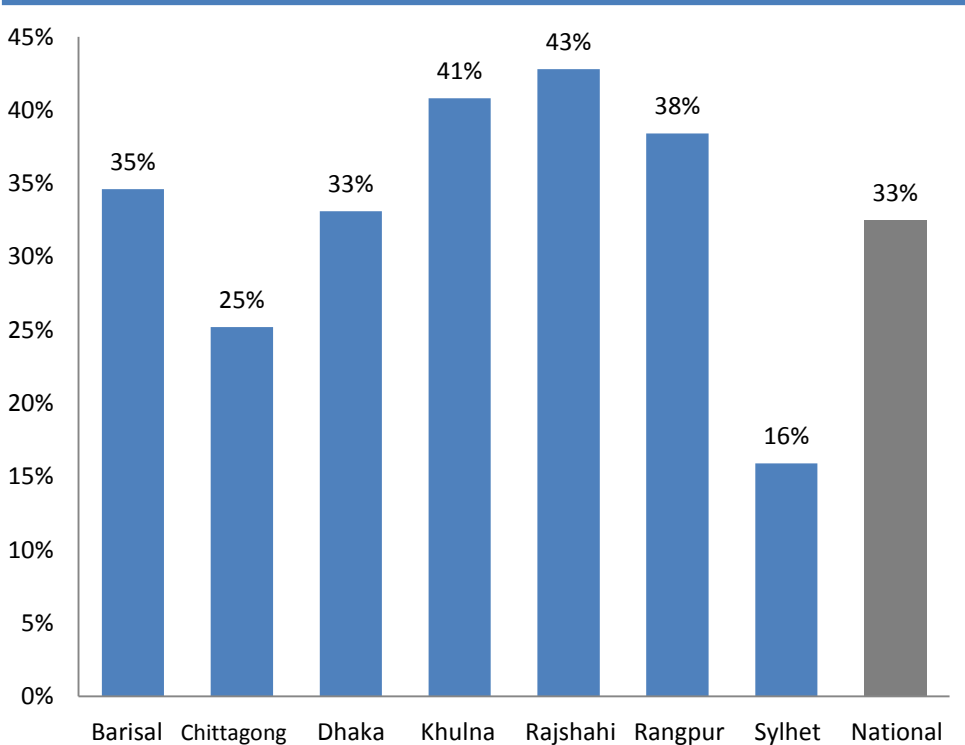
Stunted children <5 by district

Pockets of social deprivation (by composite deprivation index) by district

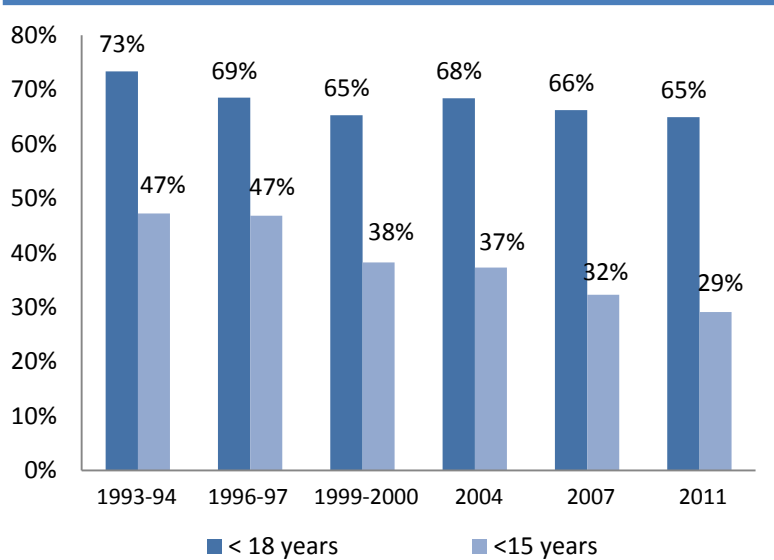


There has been some reduction in child marriage across the country during the last two decades but the prevalence is still high

Percentage of female teenage (15-19 years) married population by Division (2011)



Women aged 20-24 years who were first married before age 18, and 15, years old

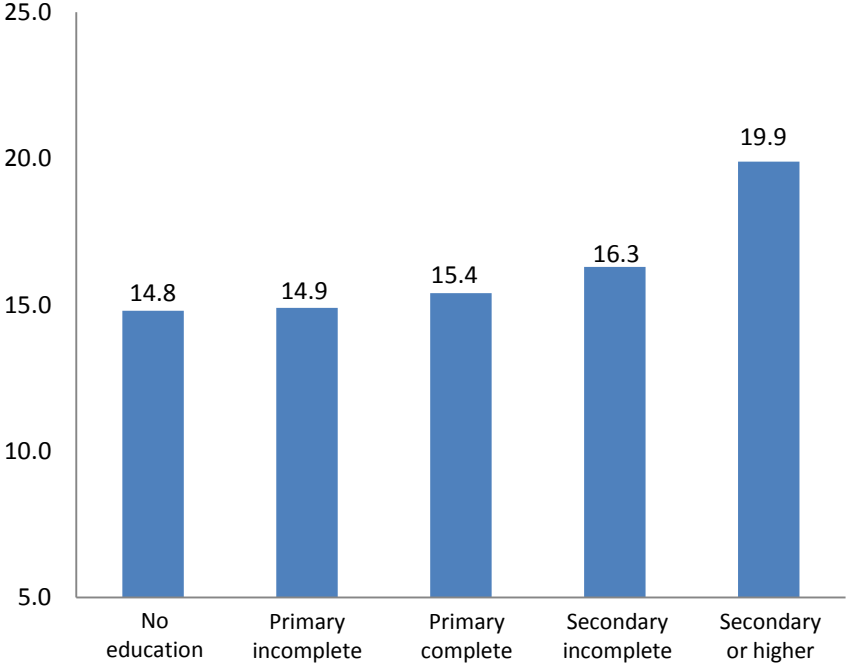


Marriage before the age of 18 is prohibited by law

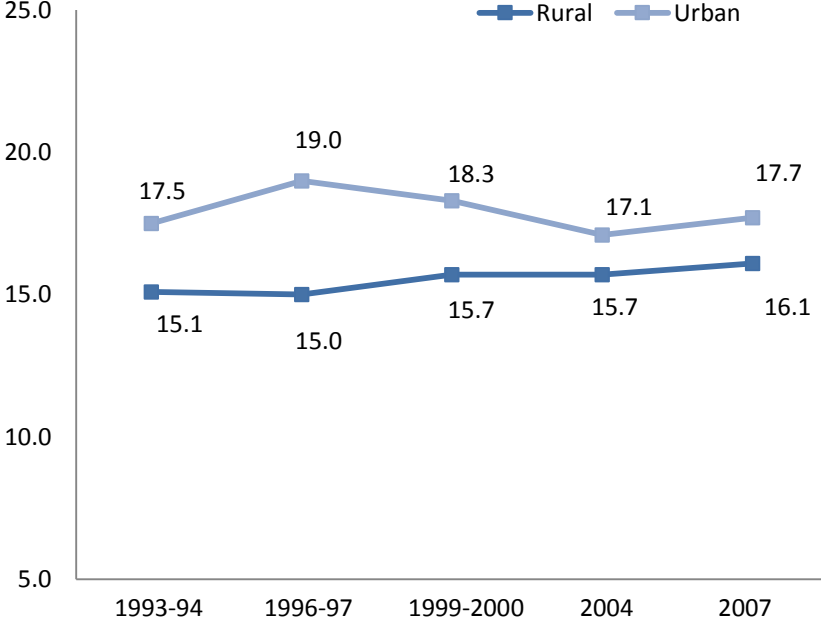
The national prevalence of low-birth weight infants (<2500 grams) is 26%

Women tend to marry later if they continue their education into secondary level. Urban-rural disparities in age of first marriage continue to exist.

Median age of first marriage of women of age 20-24 based on educational attainment (2011)

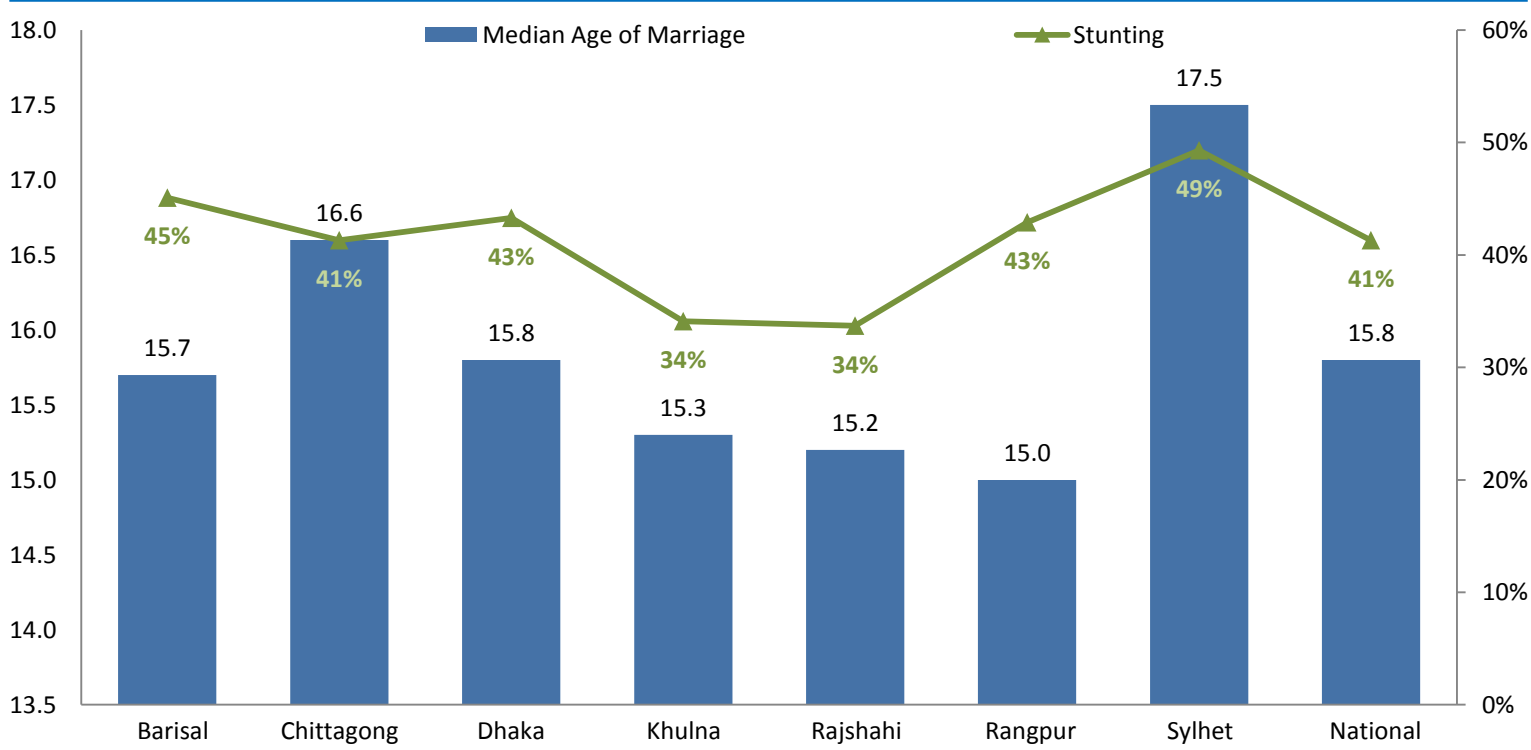


Median age of first marriage of women of age 20-24



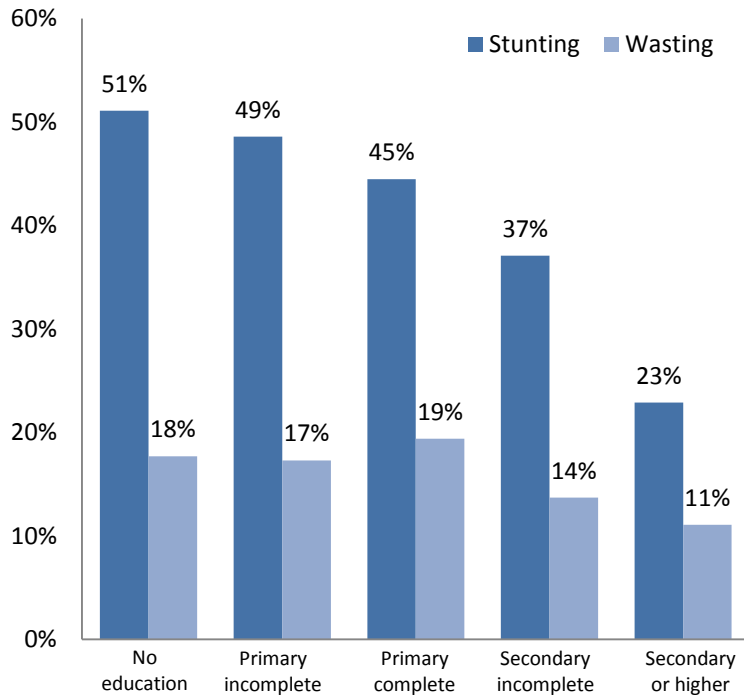
The relationship between child marriage and stunting is not clear and warrants further research. Sylhet and Chittagong have high stunting rates but higher median age of first marriage.

Median age of marriage (women 20-49 years) and stunting (<5 years children) by Division

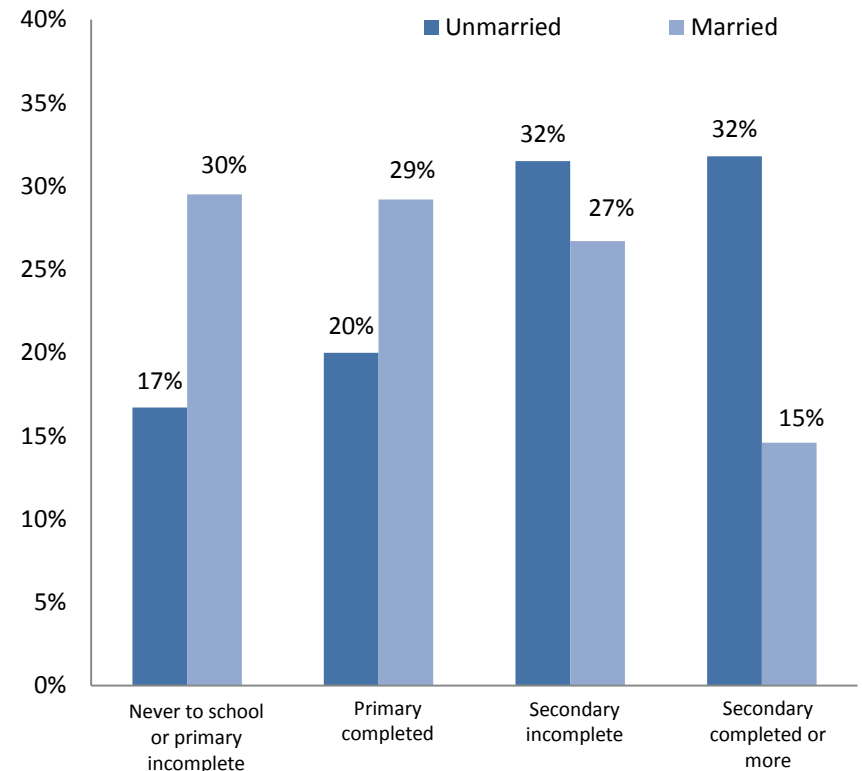


**Levels of child undernutrition fall with increasing education level of mothers.
Marriage in childhood is strongly related to education attainment in young women.**

Mother's education and child undernutrition, 2011



Educational attainment of married and unmarried young women in Bangladesh, 2011

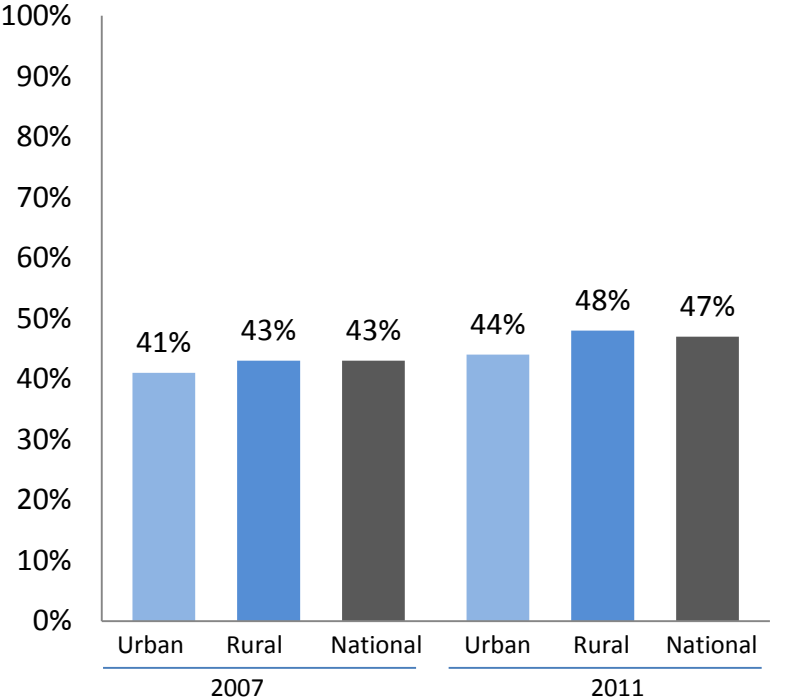


CARE PRACTICES

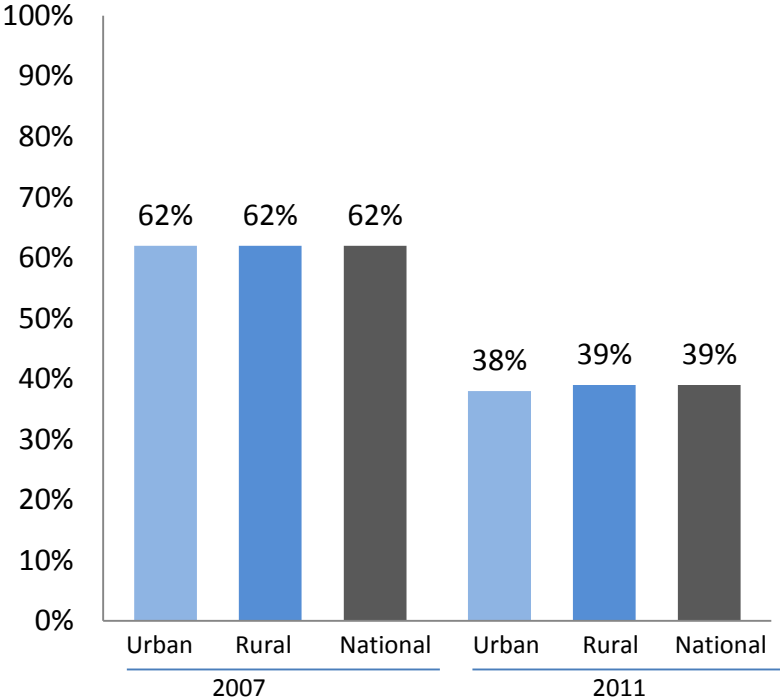
Proper breastfeeding, adequate complementary feeding, personal hygiene

Breastfeeding practices are improving overall, particularly reduced pre-lacteal feeds. However, less than half of newborns are not breastfed within one hour of birth.

**Initiation of breastfeeding
(within 1 hour of birth)**

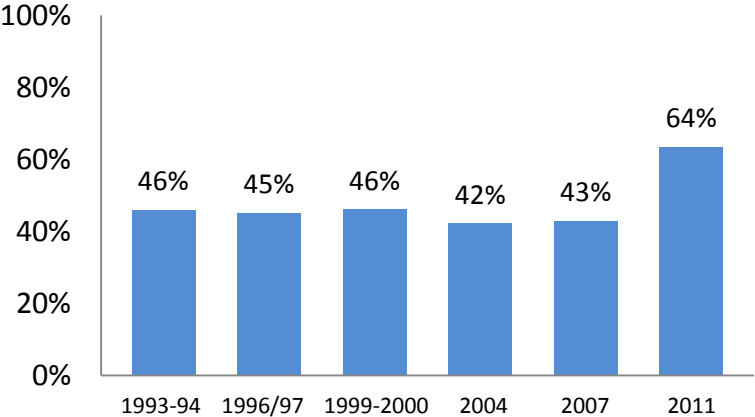


**Pre-lacteal feed
(within first 3 days of life)**



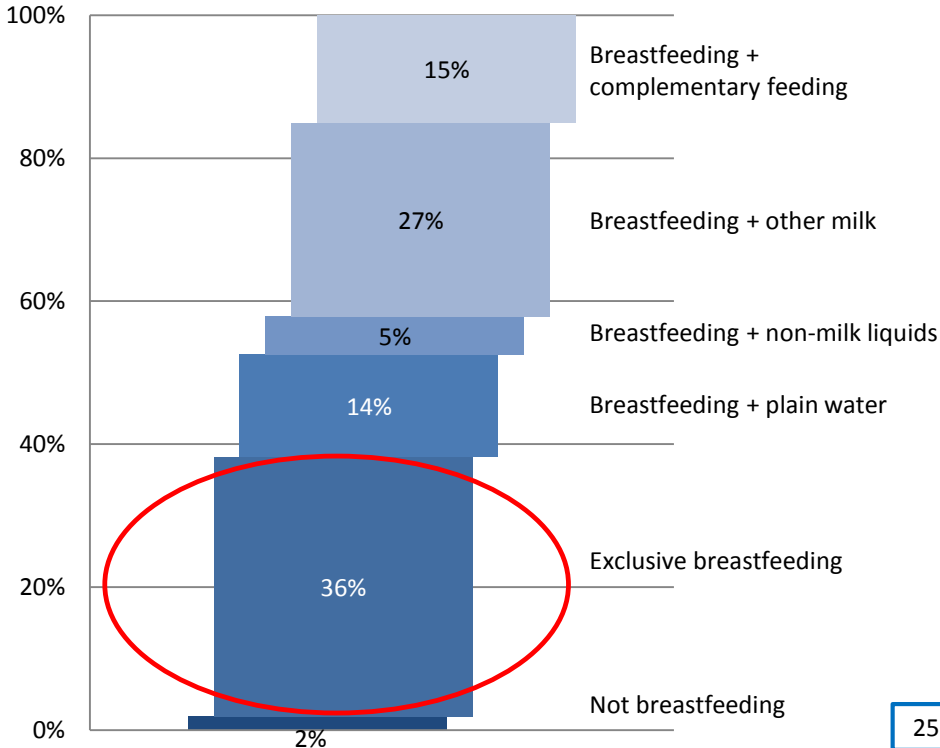
Exclusive breastfeeding rates start high in the first and second months, but drop significantly by 4-5 months, when other liquids and foods have already been introduced.

Exclusive breastfeeding (for 6 months)

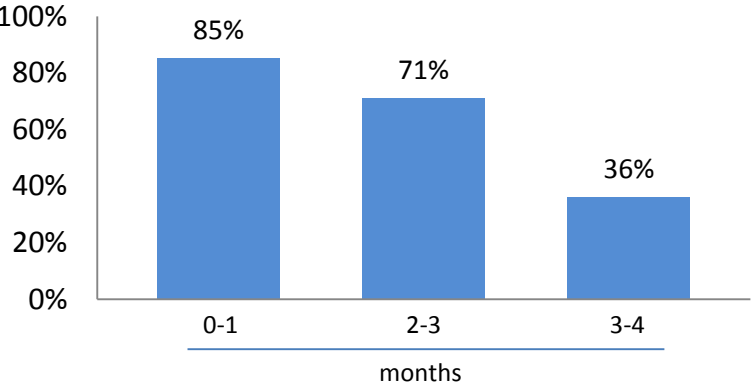


<6 months children (%)	BDHS 2011	MICS 2012-13	UESD 2013
Exclusive breastfeeding	63.5	56.4	60.0

Feeding of children 4-5 months old (2011)

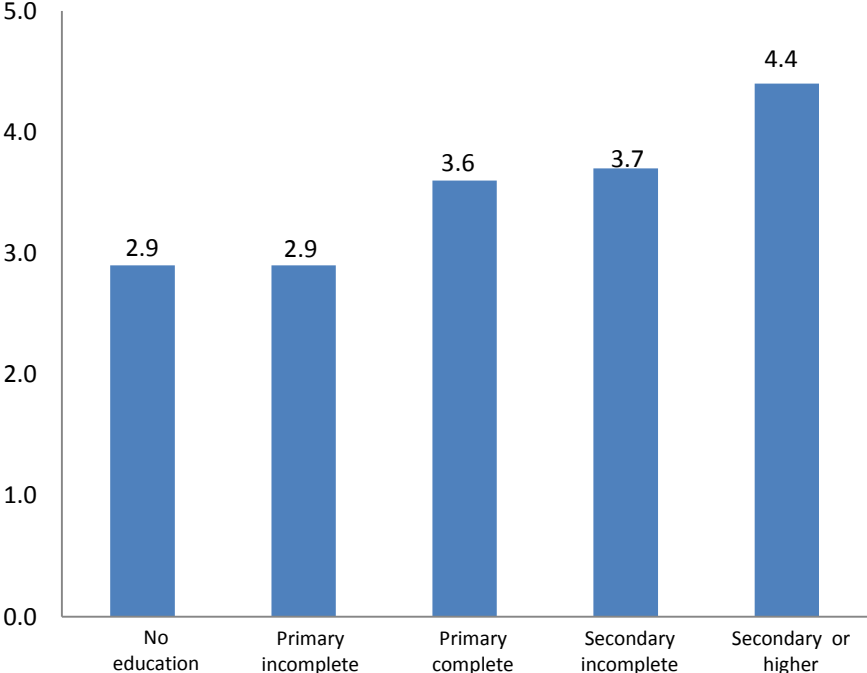


Exclusive breastfeeding by age in months (2011 only)

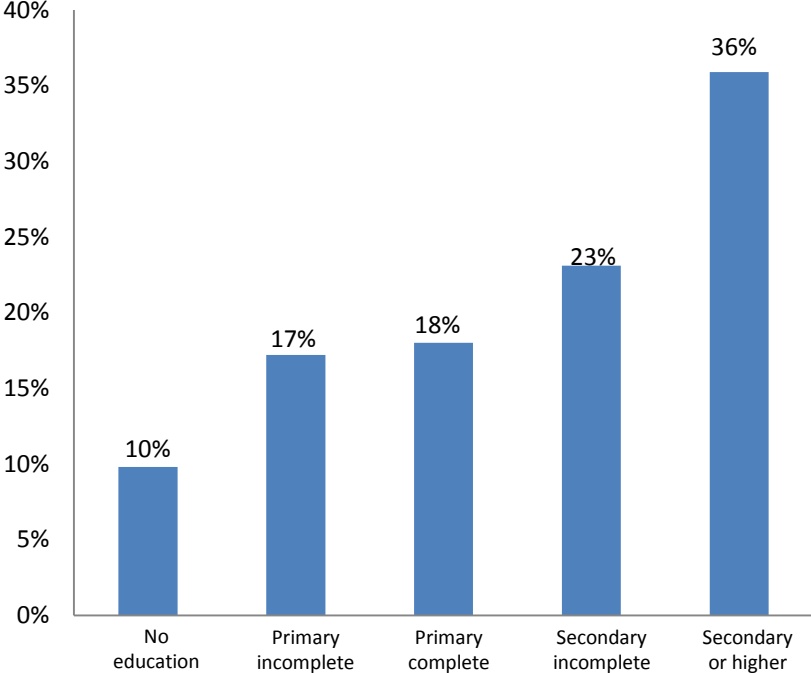


Mother's education is associated with several infant and young child feeding practices, particularly proper complementary feeding.

Median duration of exclusive breastfeeding (months) and mother's education (2011)

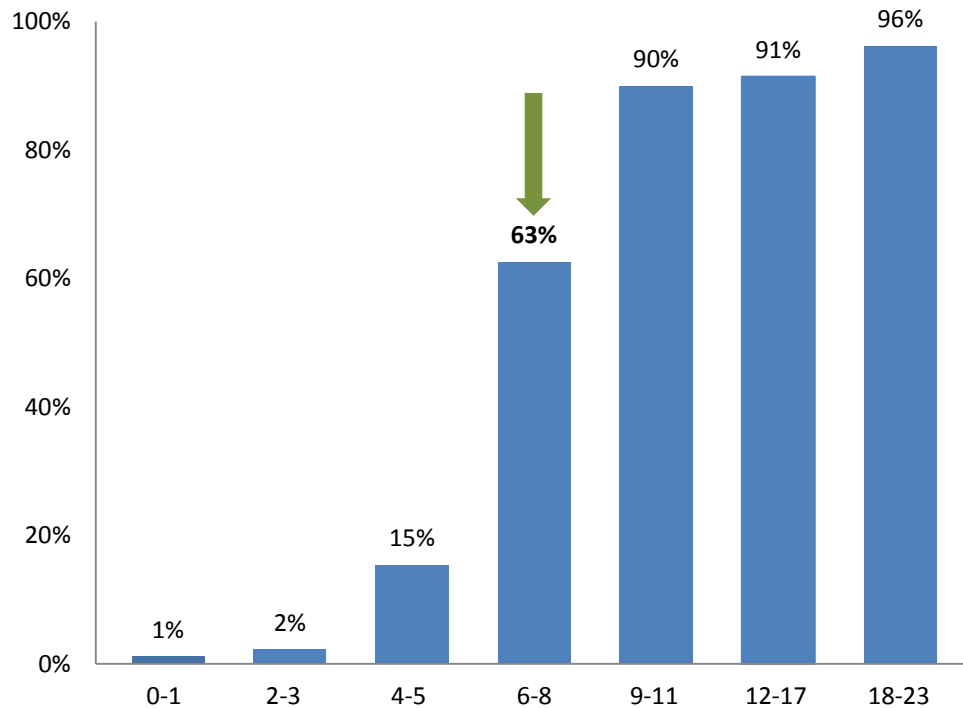


Proper complementary feeding for children 6-23 months and mother's education (2011)



18% of children receive complementary foods too early. Nearly 40% start too late.

Complementary feeding practices (children 6-23 months old)



Inappropriate complementary feeding is a cause of stunted growth and development, which leads to –

Concurrent problems and short-term consequences

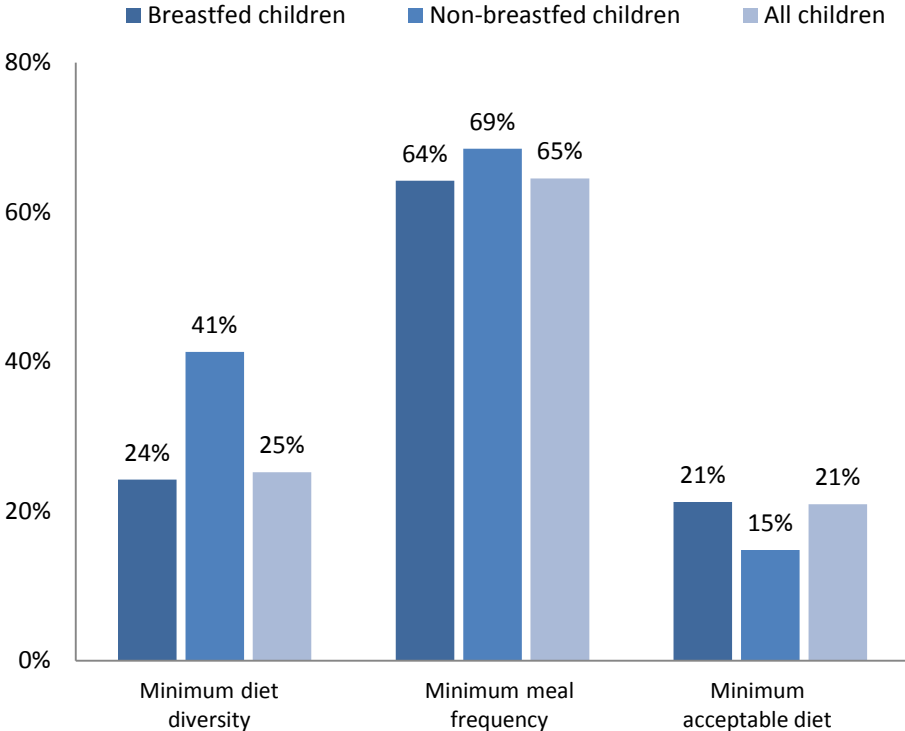
- Increased morbidities and mortality
- Decreased cognitive, motor, and language development
- Increased health expenditure and opportunity costs for care of sick child

Long-term consequences

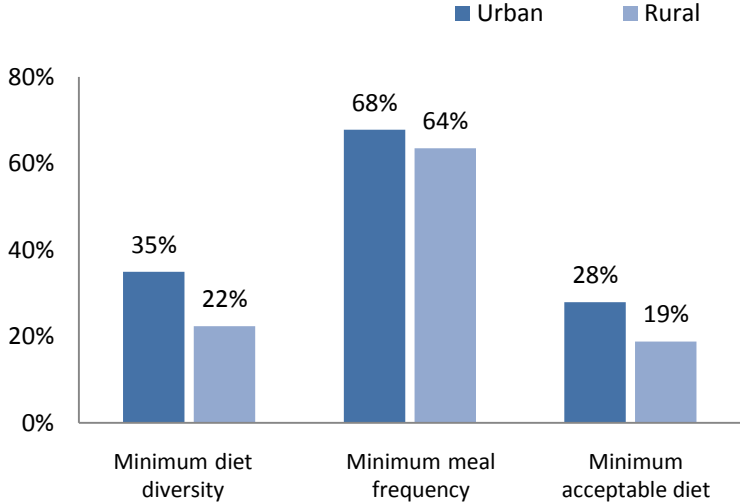
- Stunted adult stature, reproductive health problems, obesity and associated co-morbidities
- Decreased school performance, learning capacity
- Decreased work capacity and productivity

Less than a quarter of children under 2 years old receive a minimum acceptable diet with a serious situation evident for rural areas.

Complementary feeding practices (children 6-23 months old, 2011)



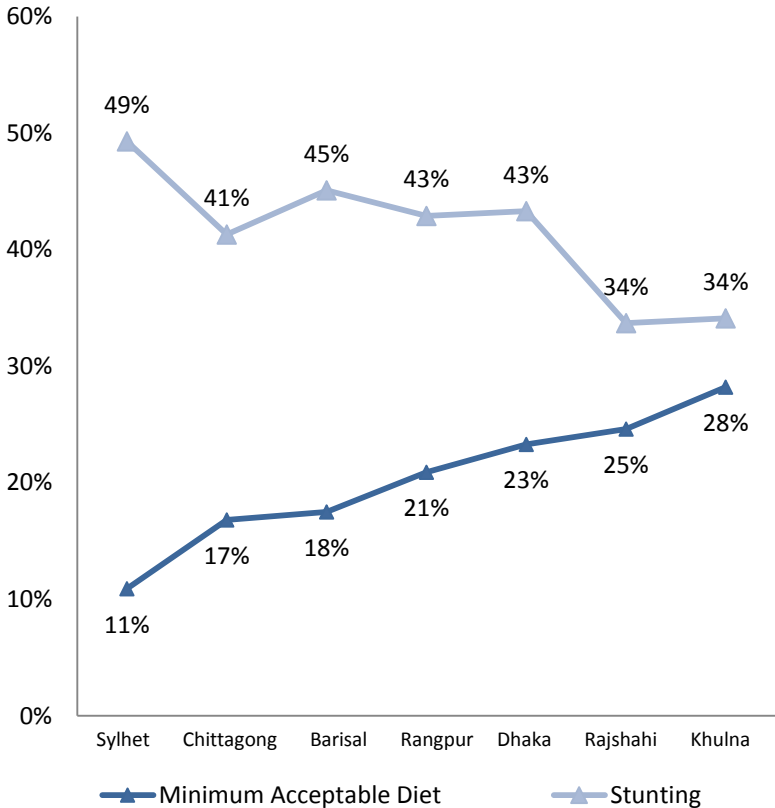
Complementary feeding practices by locality (all children 6-23 months old, 2011)



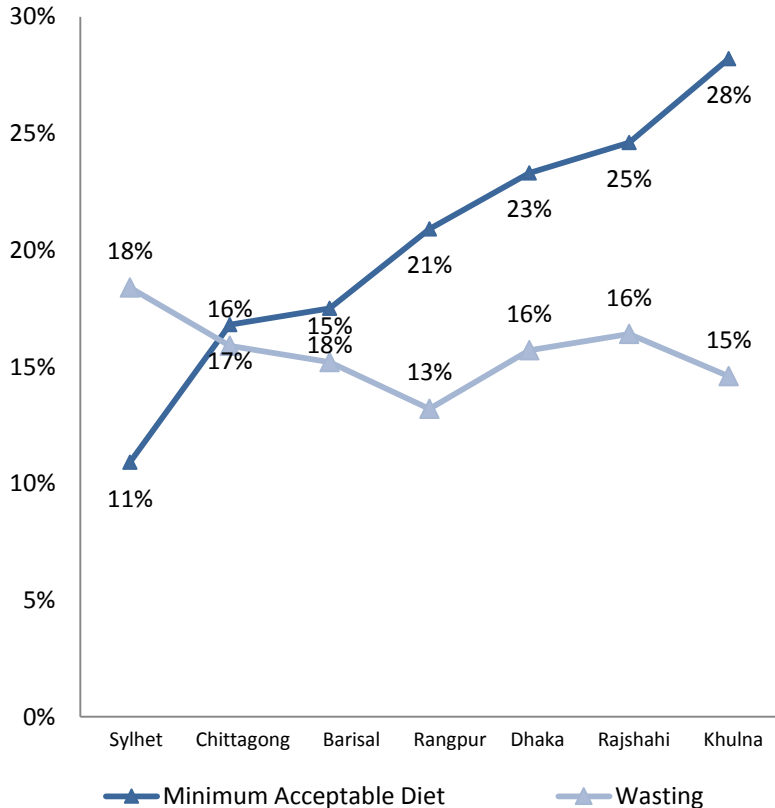
Minimum diet diversity – Proportion of children 6–23 months of age who receive foods from 4 or more food groups.
 Minimum meal frequency – Proportion of breastfed and non-breastfed children 6–23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.
 Minimum acceptable diet – Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk).

Levels of child undernutrition are strongly related to Infant and Young Child Feeding (IYCF) practices, with a strong geographical association

IYCF practice and stunting

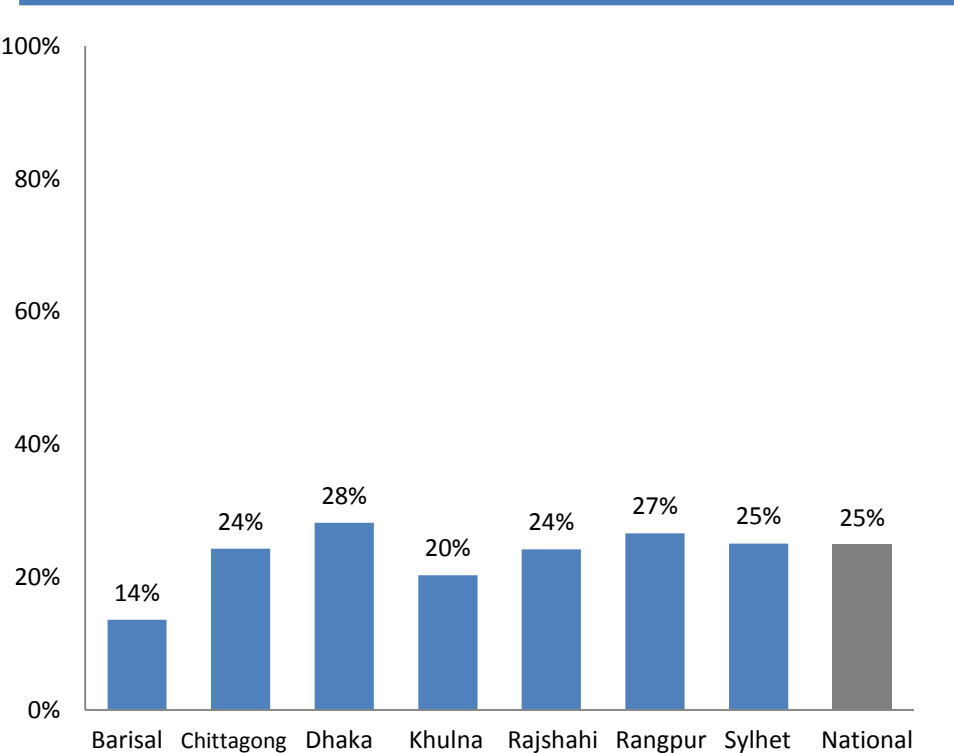


IYCF practice and wasting

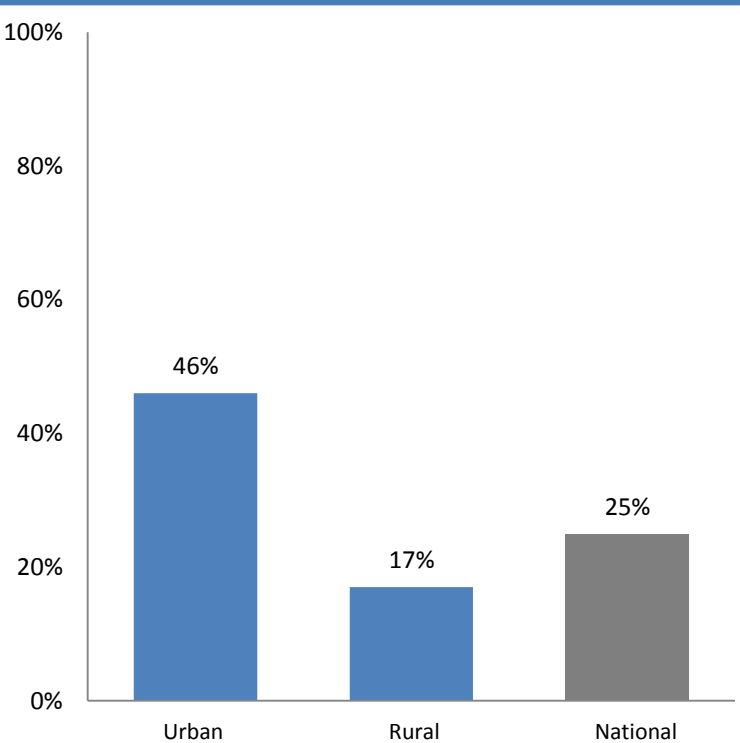


Three quarters of the population do not practice recommended hygiene behaviours, with little variation by Division but a marked urban-rural difference.

Observed use of soap and water for hand washing by Division

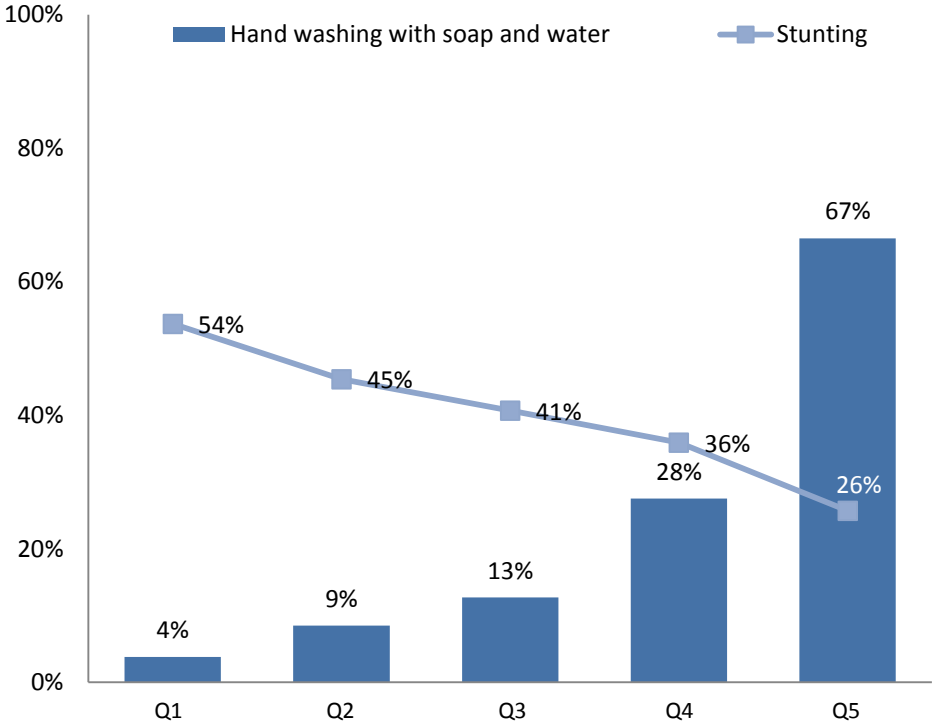


Observed use of soap and water for hand washing by locality



Hand washing behaviour improves significantly with household wealth and is related to level of stunting.

Hand washing behavior in different wealth quintiles and stunting



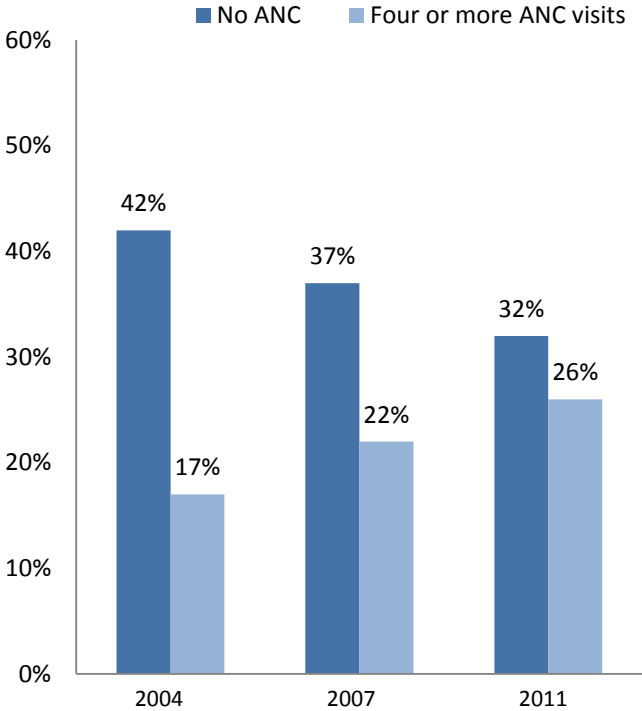
According to FSNSP 2012, although half of caregivers reported washing hands with soap after using the toilet, only 3% overall reported this behaviour before feeding a child.

HEALTH: SERVICES AND ENVIRONMENT

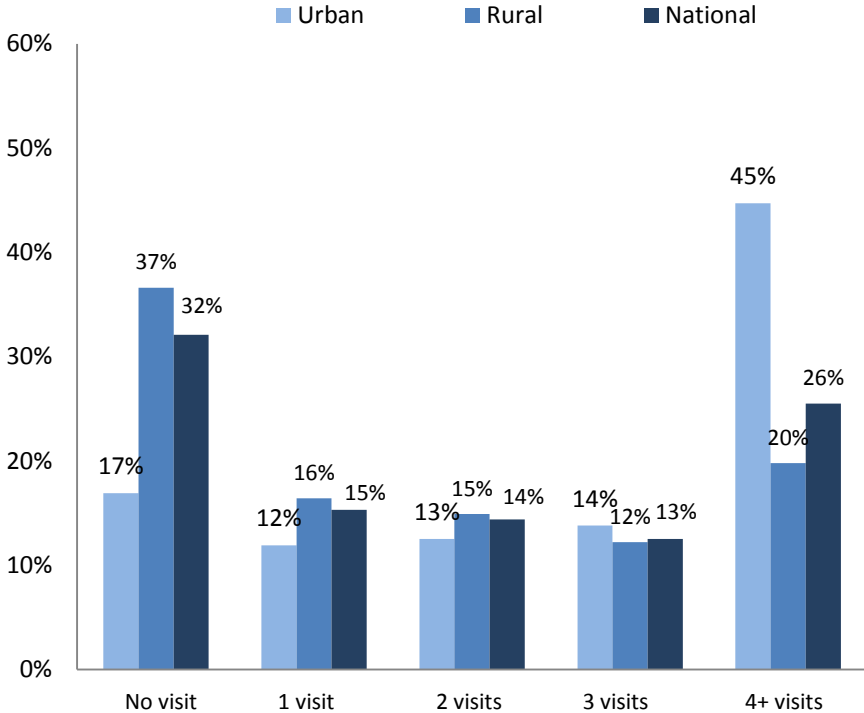
Health care services, micronutrient supplementation, water and sanitation

While the level of the recommended uptake (repeat visits) of antenatal care services is still very low, it has been rising in the last decade.

Trends in ANC coverage

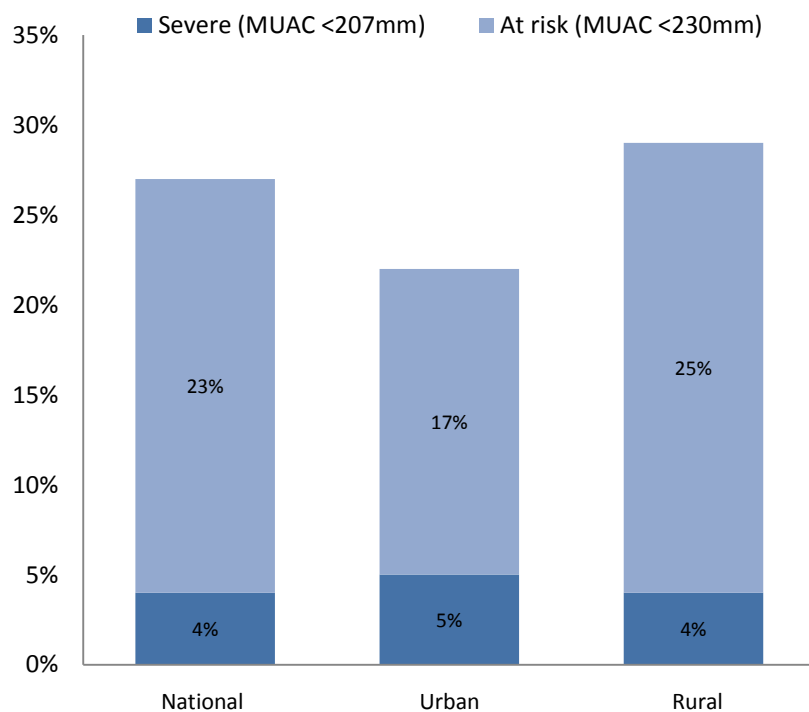


Number of ANC visits (2011)

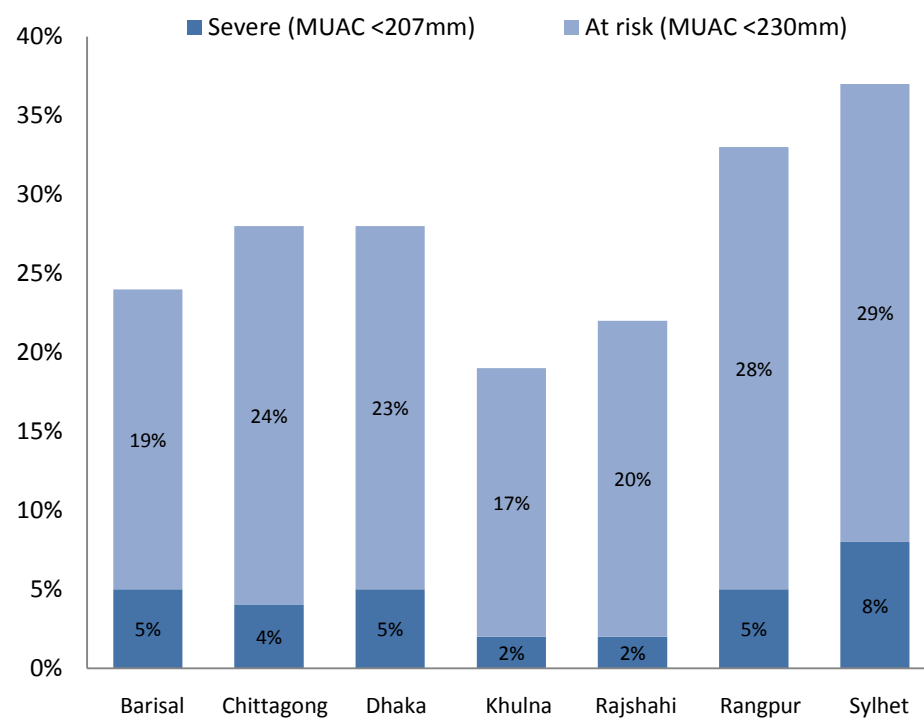


Undernutrition is more prevalent among pregnant women in rural areas, with Rangpur and Sylhet the worst affected Divisions.

Undernutrition among pregnant women by locality

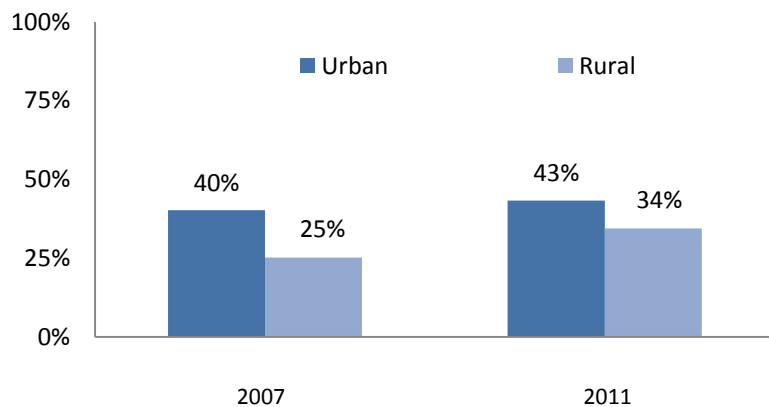


Undernutrition among pregnant women by Division

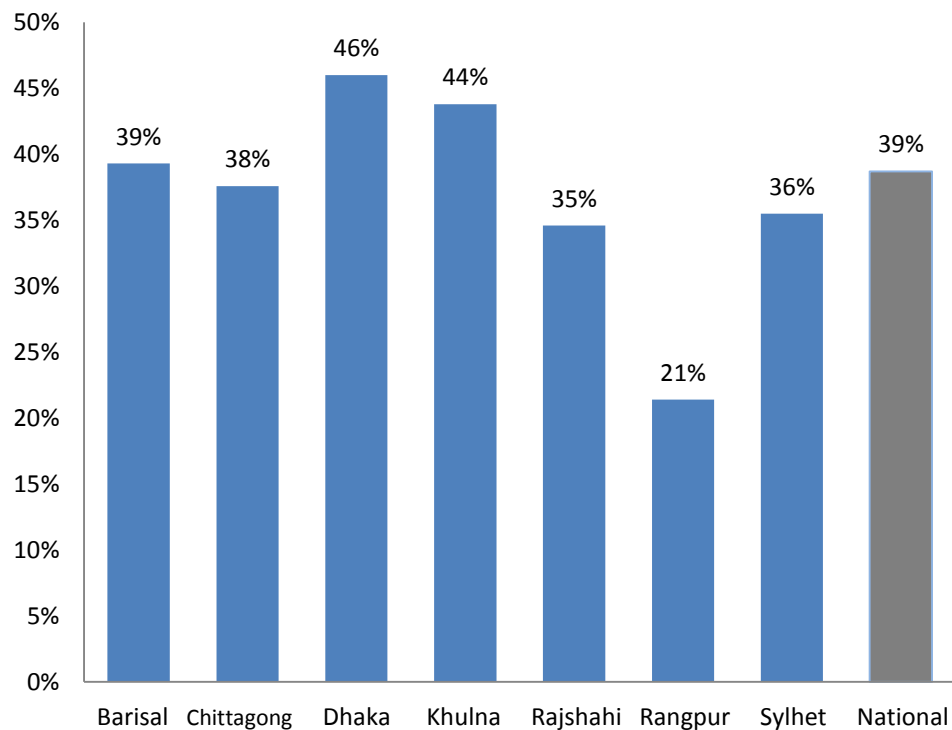


Overall access to improved water source and sanitation is gradually improving, particularly in rural areas. Safe disposal of child faeces remains a challenge.

Population with access to improved, not shared, sanitation facilities (2011)



Percentage of children (0-2 years) whose last stools were disposed of safely (2012-13)



Universal access to an improved source of drinking water (99%)

Most common sources of drinking water are tube well or borehole

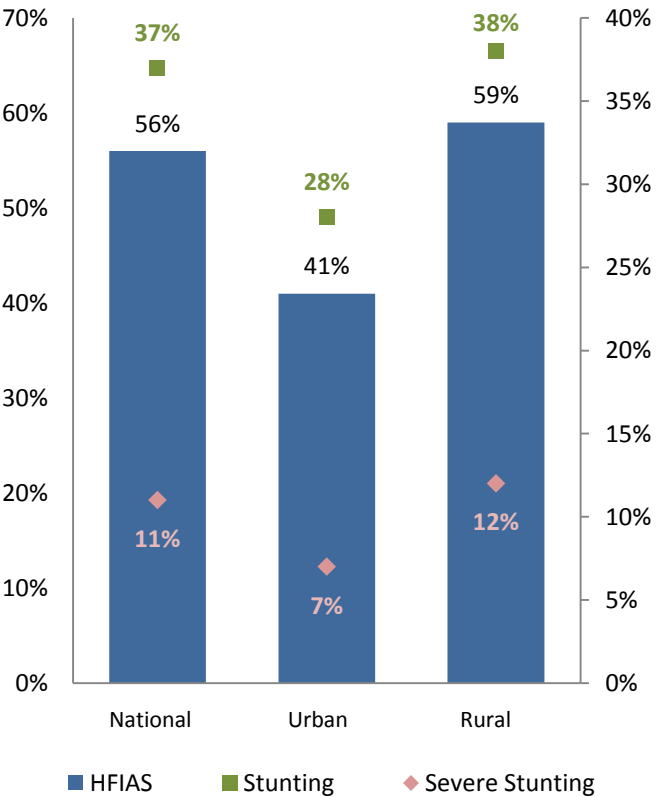
For 71% of households, drinking water is available within the premises

FOOD SECURITY

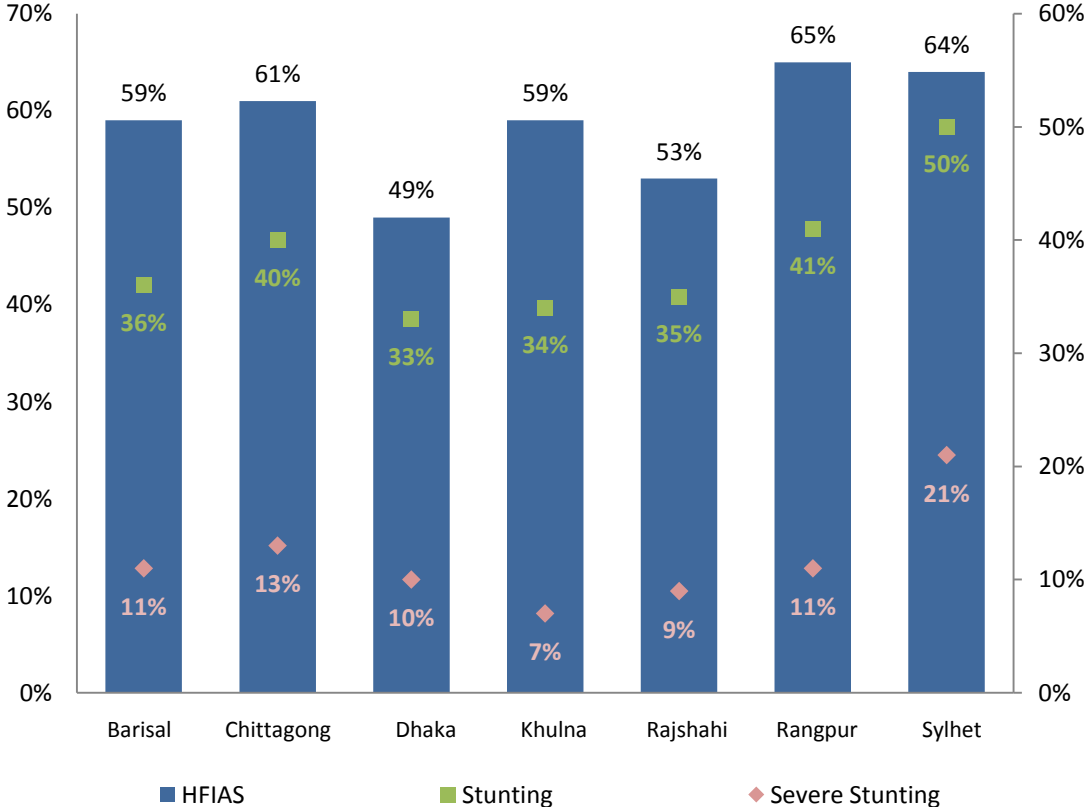
Food availability, access and consumption

Nearly 60% of rural households are food insecure (household availability and access). Food insecurity is related to child stunting.

HFIAS and stunting

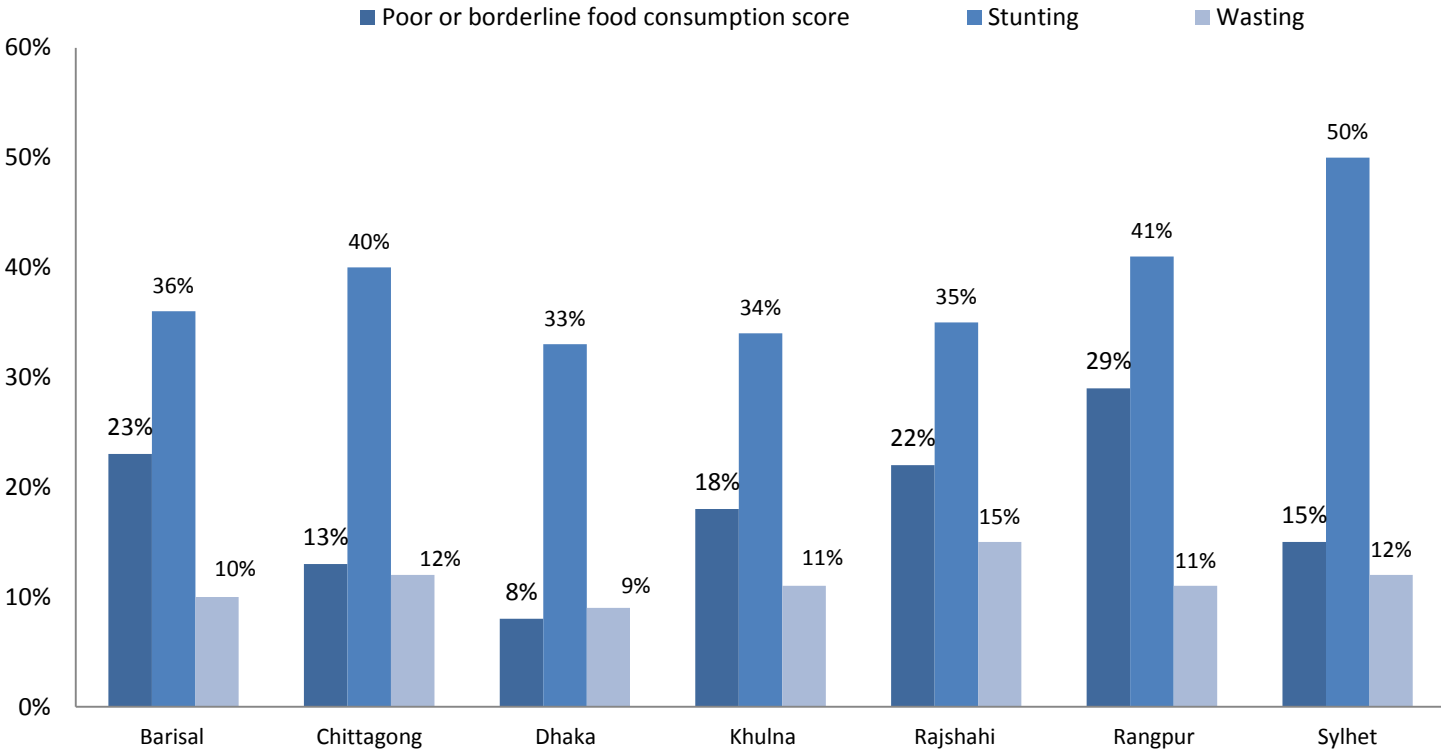


HFIAS and stunting



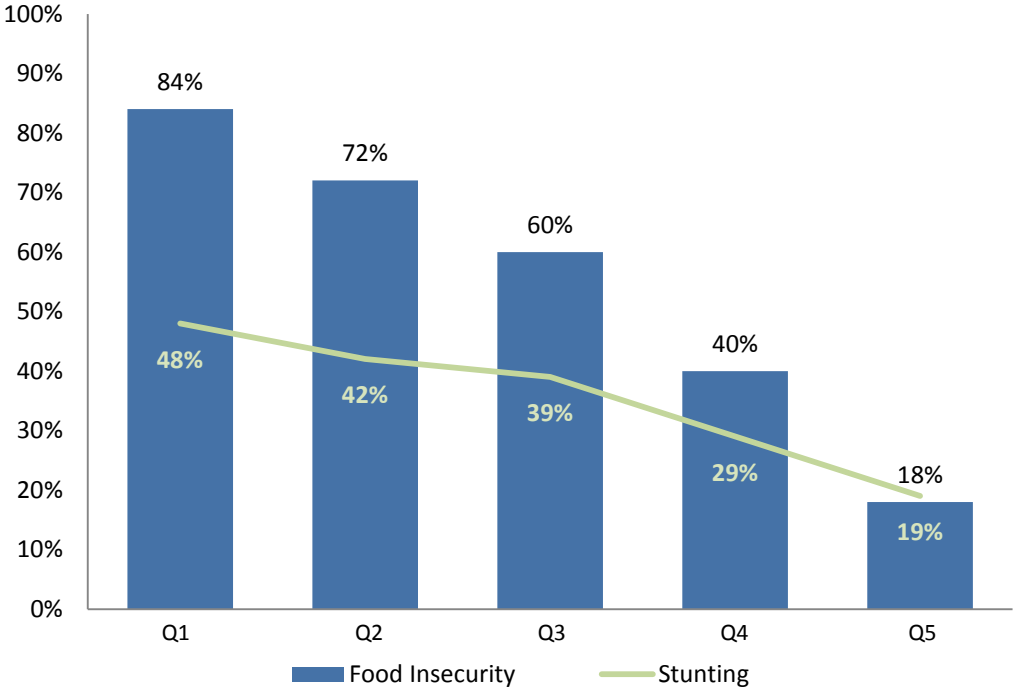
Poor and borderline household Food Consumption Score levels are widespread across the country but the relationship with undernutrition is weak by Division.

Poor and borderline household Food Consumption Score vs. undernutrition by Division



Household food insecurity drops with income. The poorest remain at very high levels of food insecurity and undernutrition.

Household food insecurity (HFIAS) and stunting according to household wealth

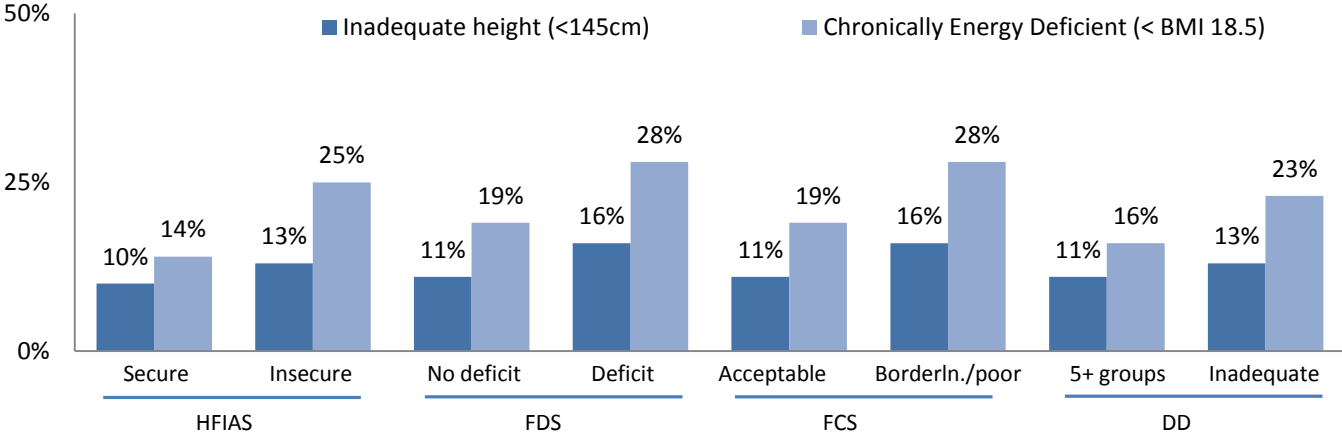


FSNSP 2012 report says that the overall levels of food insecurity have fallen in the last few years.

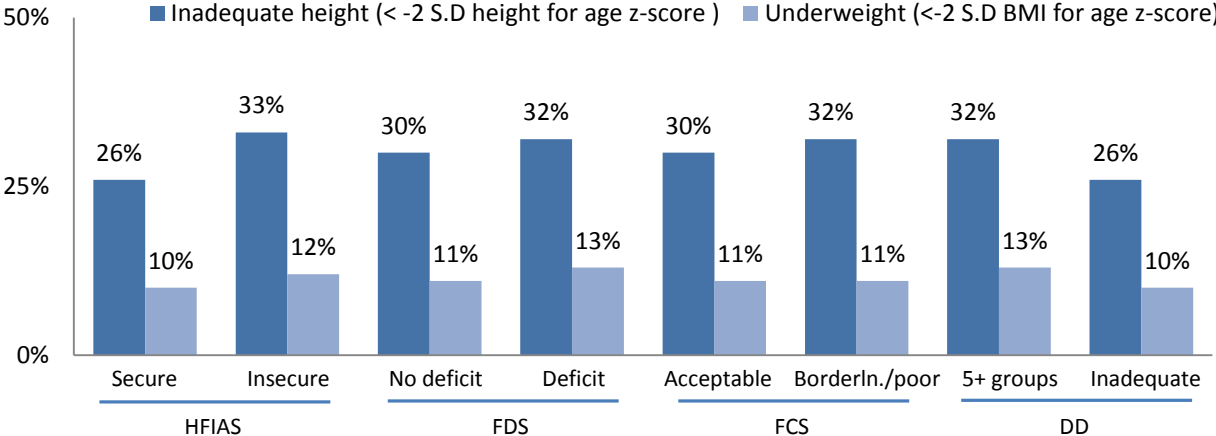
However, even the wealthiest quintile still has significant food insecurity and undernutrition

Levels of food insecurity are related to undernutrition in adult women but the relationship is not as marked for adolescent girls.

Undernutrition in adult women by food consumption and diet diversity



Undernutrition in adolescent girls by food consumption and dietary diversity



HFIAS: Household Food Insecurity Access Scale
 FDS: Food Deficit Scale
 FCS: Food Consumption Score
 DD: Diet Diversity
FSNSP 2012 report

INDICATOR DASHBOARD

For use as a monitoring and advocacy tool

Indicator Dashboard

- Not currently a serious problem
- Requiring action
- Serious problem requiring urgent action
- Not applicable

TBD To Be Determined

		Indicator	Status	Source	Year	Severity	Trend
Nutritional impact	Stunting	Prevalence of stunting among children 0-59 months old ¹	41.3%	BDHS	2011	●	improving
	Wasting	GAM prevalence among children 0-59 months old ¹	15.6%	BDHS	2011	●	improving
		SAM prevalence among children 0-59 months old ¹	4.0%	BDHS	2011	●	worsening
	Vitamin A deficiency	Children <5 with Vitamin A deficiency	20.5%	BNMS	2012	●	improving
	Iron deficiency	Children 6-59 mo. with anaemia	51.3%	BDHS	2011	●	worsening
		Women 15-49 yrs. with anaemia	42.4%	BDHS	2011	●	worsening
Iodine deficiency disorder	School-aged children w/ iodine deficiency disorders	40.0%	BNMS	2012	●	worsening	
Underlying causes	Food security	Households with poor or borderline food consumption	16.0%	FSNSP	2012		improving
		Proportion of population undernourished	16.8%	SOFI	2012	●	improving
		Global Hunger Index rating	58/78	GHI	2013	●	improving
	Health and Sanitation	Under 5 mortality rate (deaths per 1,000 live births)	53	BDHS	2011	TBD	improving
		Women 15-49 yrs. w/ problem(s) accessing health care	n.a.				not available
		Household access to improved water source	98.5%	BDHS	2011	●	improving
		Household access to improved sanitation facilities	36.6%	BDHS	2011	TBD	improving
		Timely initiation of breastfeeding	47.1%	BDHS	2011		improving
	Care	Infants 0–5 mo. exclusively breastfed	63.5%	BDHS	2011		improving
		Children 6-23 mo. old with min acceptable diet	20.9%	BDHS	2011		not available
		Caregivers washing hands after using toilet	n.a.			TBD	not available
		Time to fetch water (households that take ≥30 min)	3.7%	BDHS	2011	TBD	not available
Basic causes	Education	Females that completed primary school or higher	11.6%	BDHS	2011	TBD	improving
		Literate females ages 15-49 yrs. old	72.3%	BDHS	2011	TBD	improving
	Population	Total fertility rate	2.3	BDHS	2011	TBD	improving
	Gender	Women ages 20-49 yrs. with first birth at 15 yrs. old	10.9%	BDHS	2011	TBD	no change
		Women’s intra-household decision-making power	41.5%	BDHS	2011	TBD	improving
		Global Gender Gap ranking	86	GGGR	2012	●	worsening
	Poverty	Population living under national poverty line (upper)	31.5%	HIES	2010	TBD	improving

¹ Adjusted from 6-59 to 0-59 months to incorporate BDHS data. ² Comparing anaemia level for NPWL women, baseline 33.8% and current 40.0% (baseline for all women 15-49 n.a.). ³ Change in definition/methodology. BDHS – Bangladesh Demographic and Household Survey, BNMS – Bangladesh National Micronutrient Survey, FSNSP – Food Security and Nutrition Surveillance Project SOFI – The State of Food Insecurity in the World, GHI – Global Hunger Index, GGGR – The Global Gender Gap report, HIES – Household Income and Expenditure Survey

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