NATIONAL INTEGRATED MICRONUTRIENT AND ANTHROPOMETRIC SURVEY OF THE KYRGYZ REPUBLIC 2021 (NIMAS)

Statistical Snapshots

November 2022

The National Integrated Micronutrient and Anthropometric Survey (NIMAS) in the Kyrgyz Republic in 2021 was conducted by *the Ministry of Health of the Kyrgyz Republic with the support of the United Nations Children's Fund (UNICEF), the Food and Agriculture Organization of the United Nations (FAO), the United Nations World Food Program (WFP), World Health Organization (WHO), Mercy Corps and the United States Agency for International Development (USAID).*

The survey's main objective is to assess the prevalence of nutrient deficiencies among the target population, such as anaemia, iron deficiency, vitamin A deficiency, and low or excess weight among children, adolescent girls, and women. The survey also assessed infant and young children feeding practices and food fortification.

The data collection took place from September to November 2021 and assessed the nutrition and micronutrient status among children aged 6 to 59 months and 5-9 years, adolescent girls aged 10-19 years, women of reproductive age 15-49, and pregnant women. The primary sampling units (PSUs) from the 2018 Multiple Indicator Cluster Survey (MICS) served as the sampling frame for the NIMAS 2021. The research team used a two-stage sampling procedure to randomly select households, and subsequently children, adolescent girls, and women.

A series of Statistical Snapshots of the main findings of the survey are consolidated in this publication. A general objective of the publication is to facilitate the timely dissemination and use of results from the survey.

Suggested citation:

Ministry of Health of the Kyrgyz Republic, UNICEF, FAO, WFP, WHO, USAID, USAID Advancing Nutrition, MercyCorps. National Integrated Micronutrient and Anthropometry Survey 2021. Snapshots of Key Findings. Bishkek, the Kyrgyz Republic.

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Summary Results

Target group	Indicator[a]	Result	Table[b]
Household			
	Iodized salt	98.2%	Table 15
	Adequately iodized salt (≥15 ppm)	75.6%	
	Food insecurity	29.6%	
	Iron fortified flour	24.1%	Table 18
	Adequately iron fortified flour[c]	1.7%	
Children 6-59 months of age			
	Ever breastfed	96.9%	Table 23
	Early initiation of breastfeeding	91.8%	
	Introduction of solid foods (6-8 months)	74.5%	
	Minimum dietary diversity	26.2%	
	Minimum meal frequency	64.3%	
	Minimum acceptable diet	15.3%	
	Bottle feeding in the past 24h	50.0%	
	Stunting	7.0%	Table 27
	Wasting	0.8%	Table 28
	Overweight or obese	7.3%	Table 29
	Underweight	0.7%	
	Small head circumference	1.3%	Table 30
	Anemia	20.9%	Table 31
	Iron deficiency	47.0%	
	Iron deficiency anemia	15.0%	
	Vitamin A deficiency	15.0%	Table 32
	Vitamin D deficiency (subsample)	5.0%	Table 33
	Vitamin D deficiency or insufficiency (subsample)	25.4%	
Children 5-9 years of age			
	Meets minimum dietary diversity	70.2%	Table 41
	Short stature	4.3%	Table 43
	Thinness	1.4%	Table 44
	Overweight or obese	13.8%	
	Underweight	2.6%	Table 45
	Anemia	7.8%	Table 46
	Iron deficiency	29.2%	
	Iron deficiency anemia	4.5%	
	Vitamin A deficiency	16.0%	Table 47

Target group	Indicator[a]	Result	Table[b]
Adolescent girls (10-18 years)			
	Meets minimum dietary diversity	68,6%	Table 53
	Short stature	2,9%	Table 55
	Thinness	2,4%	Table 56
	Overweight	10,8%	
	Obese	3,7%	
	Overweight or obese (combined)	14,5%	
	Anemia	14,6%	Table 57
	Iron deficiency	46,5%	
	Iron deficiency anemia	12,7%	
	Vitamin A deficiency	7,1%	Table 58
	Folate deficiency	83,6%	Table 59
	Vitamin D deficiency (subsample)	8,6%	Table 60
	Vitamin D deficiency or insufficiency (subsample)	39,3%	
	Urinary iodine median (µg/L)	175,1	Table 61
Non-pregnant women (15-49 years)			
	Meets minimum dietary diversity	69.5%	Table 69
	Underweight	5.8%	Table 71
	Overweight	27.2%	
	Obese	17.0%	
	Overweight or obese (combined)	44.3%	
	Anemia	25.3%	Table 72
	Iron deficiency	55.9%	
	Iron deficiency anemia	23.1%	
	Vitamin A deficiency	4.3%	Table 73
	Folate deficiency	83.2%	Table 74
	Vitamin D deficiency (subsample)	15.6%	Table 75
	Vitamin D deficiency or insufficiency (subsample)	51.1%	
	Urinary iodine median (µg/L)		
	Non-pregnant non-lactating women	167.19	Table 76
	Non-pregnant lactating women	134.26	Table 77
Pregnant women			
	Meets minimum dietary diversity	66.5%	Table 84
	Undernutrition (low MUAC)	6.9%	-
	Anemia	49.3%	Table 85
	Urinary iodine median (µg/L)	180.5	Table 86

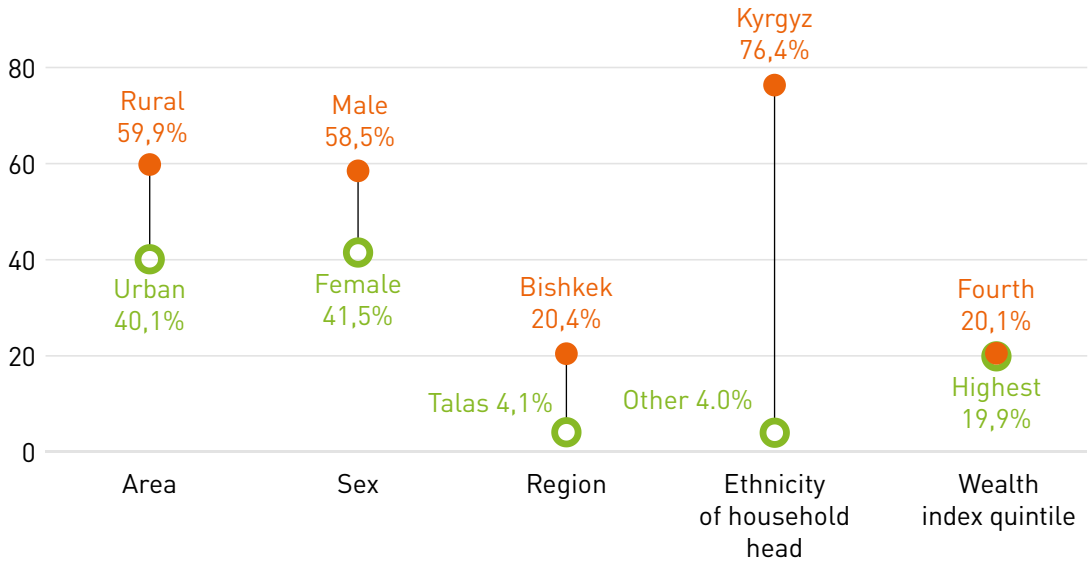
a See text of method section for case definitions.

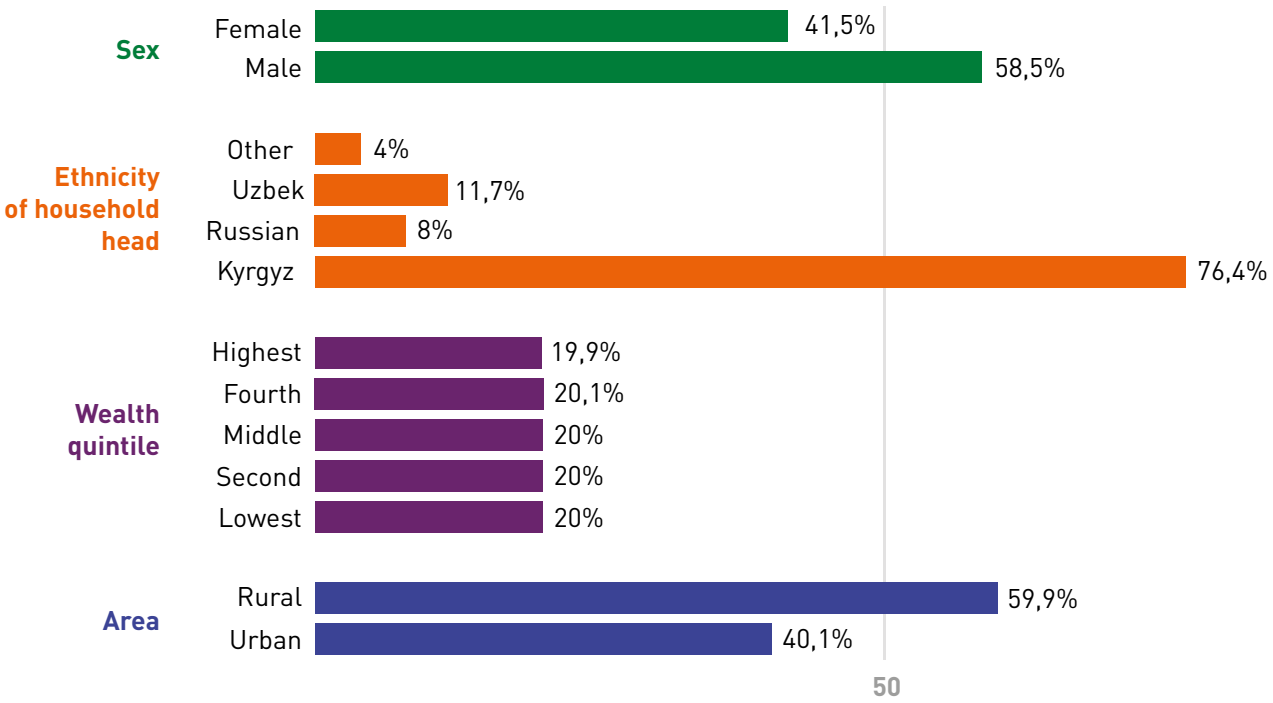
b Refer to the table indicated for more detailed analysis of the outcome, including group-specific results by age, Region, wealth quintiles and other analyses.

c Adequately fortified: iron EDTA >15ppm; ferrous sulfate, ferrous fumerate >60ppm

Characteristics of Participating Households

Participating Households by Socio-Economic Demographic Characteristics





Participating Households by Region

Region	N	%	% in most recent census
National	**3062**	**100**	**100**
Batken	298	7	8
Jalal-Abad	321	16	19
Issyk-Kul	352	8,8	8
Naryn	312	4,6	4
Osh	332	17	21
Talas	283	4,1	4
Chui	308	16,9	15
Bishkek c.	476	20,4	16
Osh c.	380	5,2	5

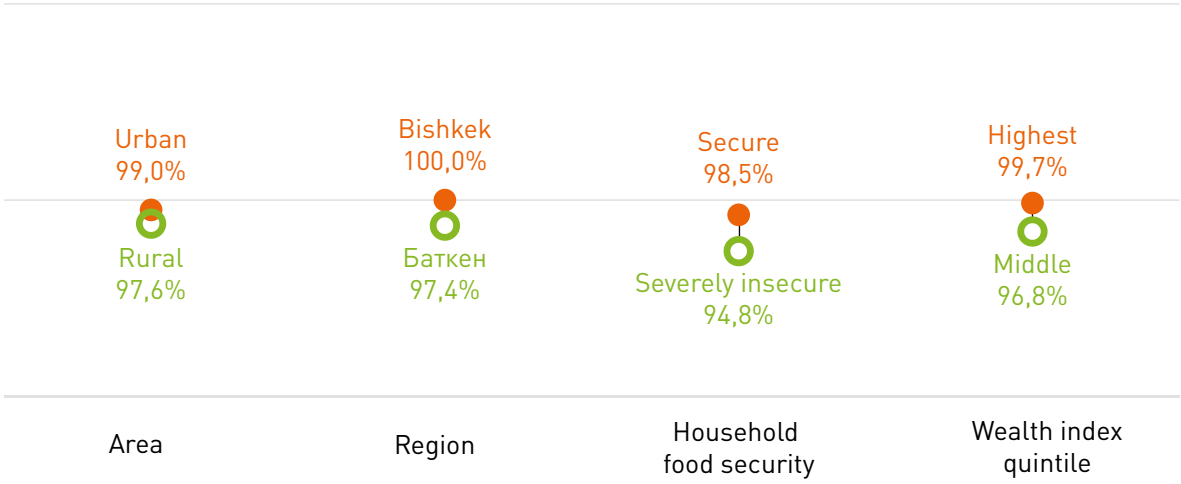
Key Messages

- In total, 3062 households were included, with about 60% recruited from rural are
- A large majority of households in the Kyrgyz Republic have household heads who are of Kyrgyz ethnicity
- Almost 60% of the household heads are male and about 90% of the household heads completed secondary school or higher

Data from this snapshot can be found in table 7: Characteristics of participating households

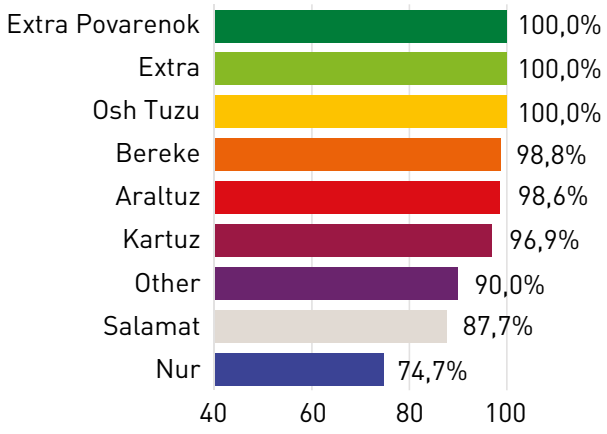
Salt Iodization, Households

Salt Iodization by Socio-Economic Demographic Characteristic



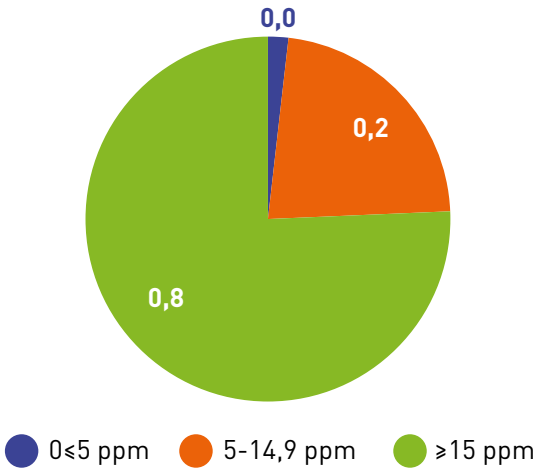
Proportion of households in which salt was iodized and adequately iodized by socio-economic demographic characteristics

Salt Iodization by Salt Brand



Proportion of households in which salt was iodized and adequately iodized, by salt brand

Proportion of Households in Which Salt Was Iodized and Adequately Iodized



Salt iodine concentration by categories not iodized (0-<5ppm), inadequately iodized (5-14.9ppm) and adequately iodized (⩾ 15 ppm)

Median Iodine Concentration, Regional distribution of households in which salt was iodized (percent)

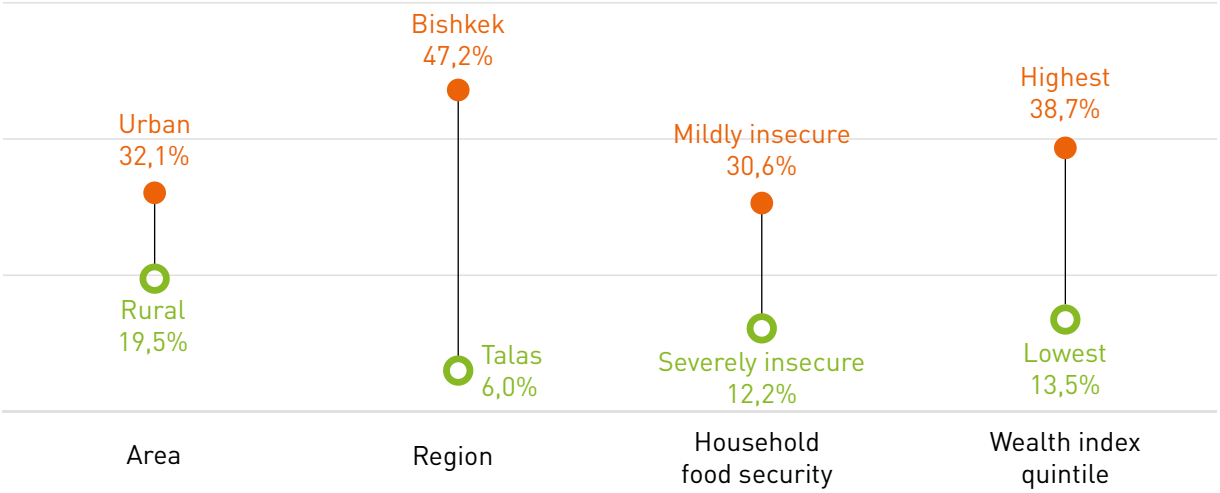
Region	N	%	%
National	**2862**	**19,74**	**98,2**
Batken	295	17,25	97,4
Jalal-Abad	304	24,62	99,0
Issyk-Kul	336	16,07	98,5
Naryn	287	17,14	99,3
Osh	304	16,83	96,6
Talas	278	21,74	95,6
Chui	281	20,35	97,5
Bishkek c.	417	23,45	100
Osh c.	360	16,79	97,5

Key Messages

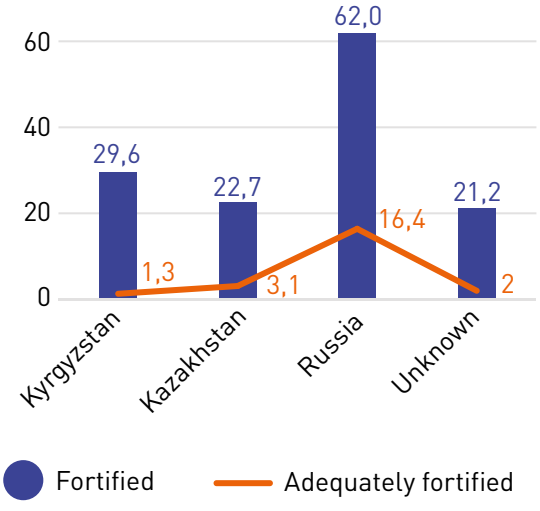
- Adequately iodized salt is available in 98% of households nationally
- A significantly larger proportion of households in urban than rural areas have adequately iodized salt.
- Significant differences were also found by Region: more than 95% of households in Bishkek have adequately iodized salt, whereas just over 60% in Issyk-Kul, Batken and Osh City.
- A larger proportion of households in the highest quintile use adequately iodized salt.
- Salt brand and label is not significantly associated with any level of iodization.
- The proportion of adequately iodized salt is higher in samples that were not labelled as iodized compared to salt in the original packaging stating that it is iodized.
- No association between food insecurity and adequate salt iodization.

Flour Fortification, Households

Households with Fortified and Adequately Fortified Flour, by Socio-Economic Demographic Characteristics

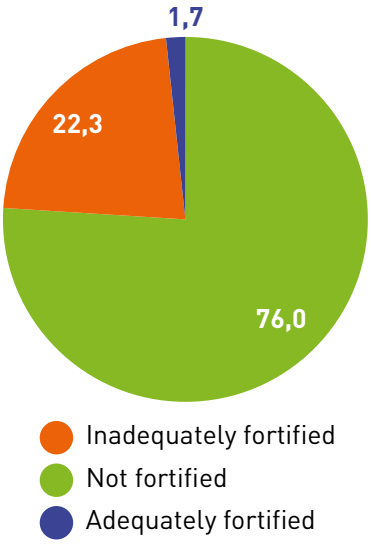


Flour Fortification by Country of origin

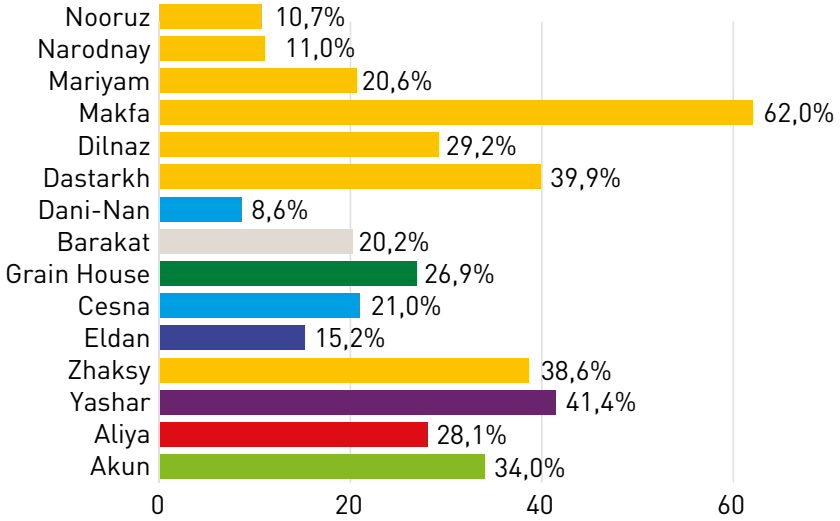


Proportion of households with fortified and adequately fortified flour by flour packaging

Proportion of Households with Fortified. Adequately Fortified and Not Fortified Flour



Flour Fortification by Brand



Flour Fortification by Region

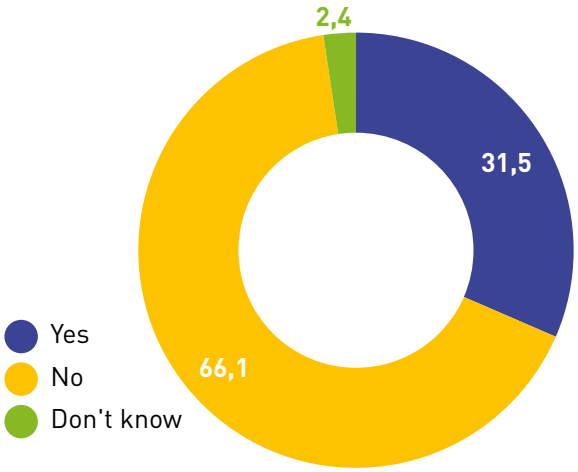
Region	Fortified (%)	Adequately fortified(%)
National	**24,1**	**1,7**
Batken	21,5	0
Jalal-Abad	13	2,6
Issyk-Kul	22,2	3,7
Naryn	35,6	4
Osh	29,1	0
Talas	6,1	1,8
Chui	6	0
Bishkek c.	47,2	3,4
Osh c.	34,4	2,2

Key Messages

- About half of the respondents believed that the flour they used was fortified.
- A majority of the packages stated that the flour was fortified
- Nearly one-quarter of the wheat flour in the Kyrgyz Republic is adequately fortified.
- There is a higher prevalence of fortified flour in urban areas, Bishkek and higher wealth status.
- There is an association between wheat flour fortification and household food security status.

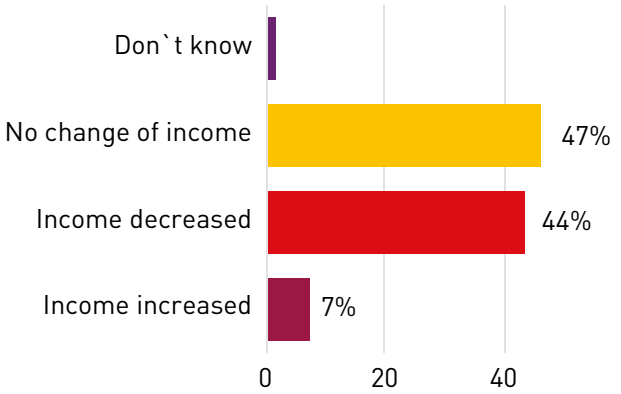
Effect of COVID-19, Households

Household Member Infected with COVID-19



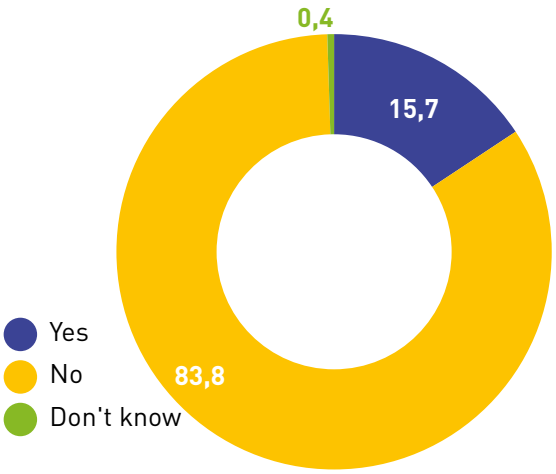
Percentage of household member reported infected with COVID since start of the pandemic

COVID-19 Effects on Household Income



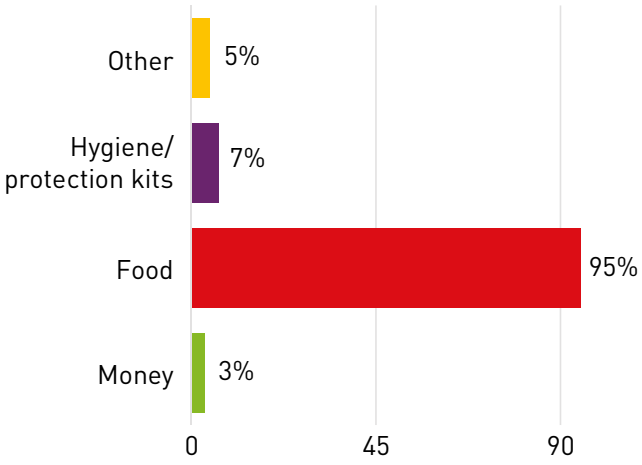
Percentage of households on how COVID-19 effected household income

Household received assistance during the pandemic



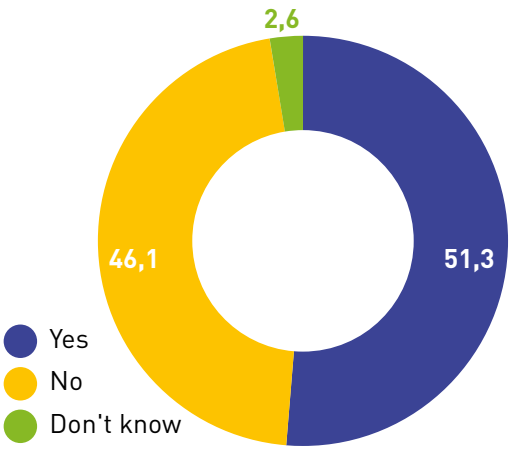
Percentage of household which received assistance during the pandemic

Type of Assistance



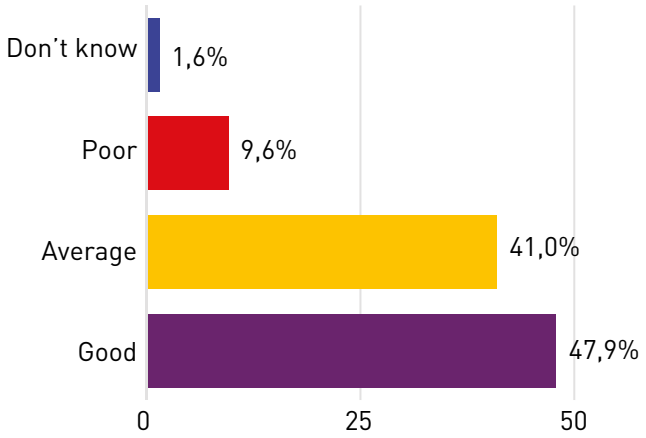
Percentage of households with type of assistance during the pandemic

Amount of Food Received was Sufficient



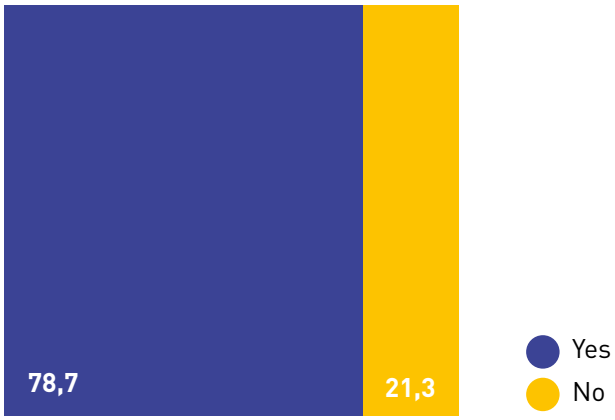
Percentage of household who was sufficient on amount of received foods

Quality of Food Provided



Percentage of household assessment by quality of provided food

Availability of Hand Sanitizer (observed)



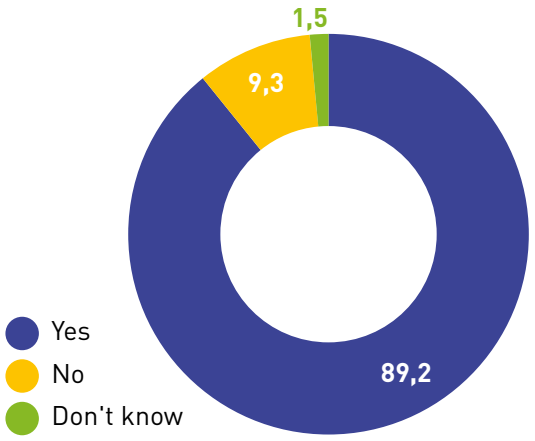
Percentage of households with availability/non-availability of hand sanitizer

Key Messages

- For almost all of the households, COVID-19 had negative impact on the income
- Most of the households receiving assistance during the pandemic received it in type of food.

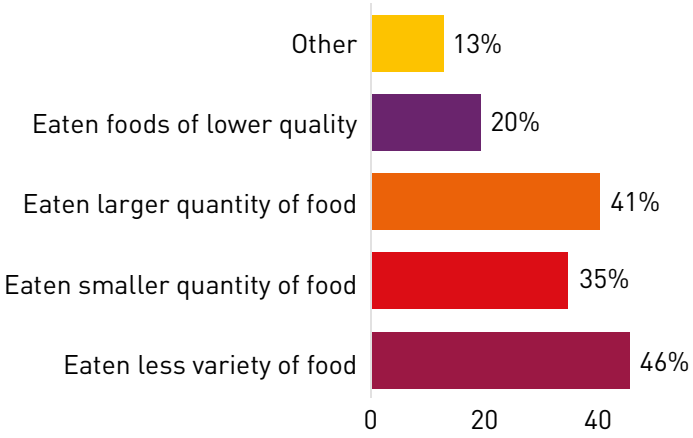
Effect of COVID-19 on Food Access and Consumption, Households

Food Cost Increase since COVID-19 Outbreak



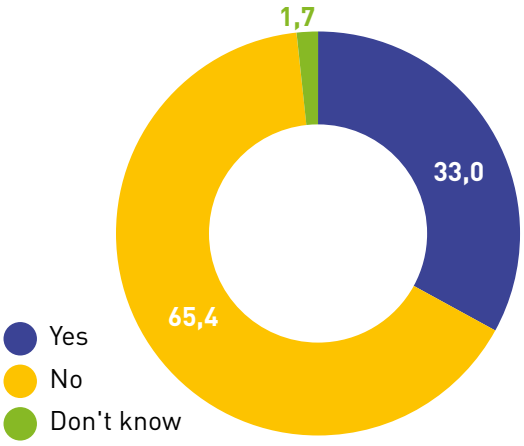
Percentage of household member reported that costs of food have increased since COVID-19 outbreak

Changes in household's Eating Behavior Because of COVID-19



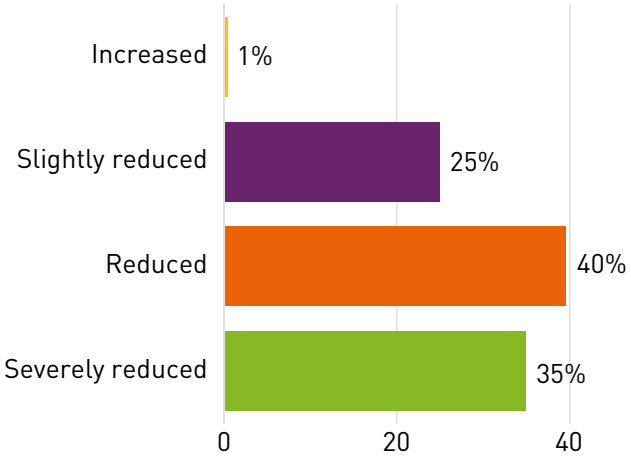
Percentage of COVID-19 effects on changes in household's eating behavior

COVID-19 Affects Household Food Access



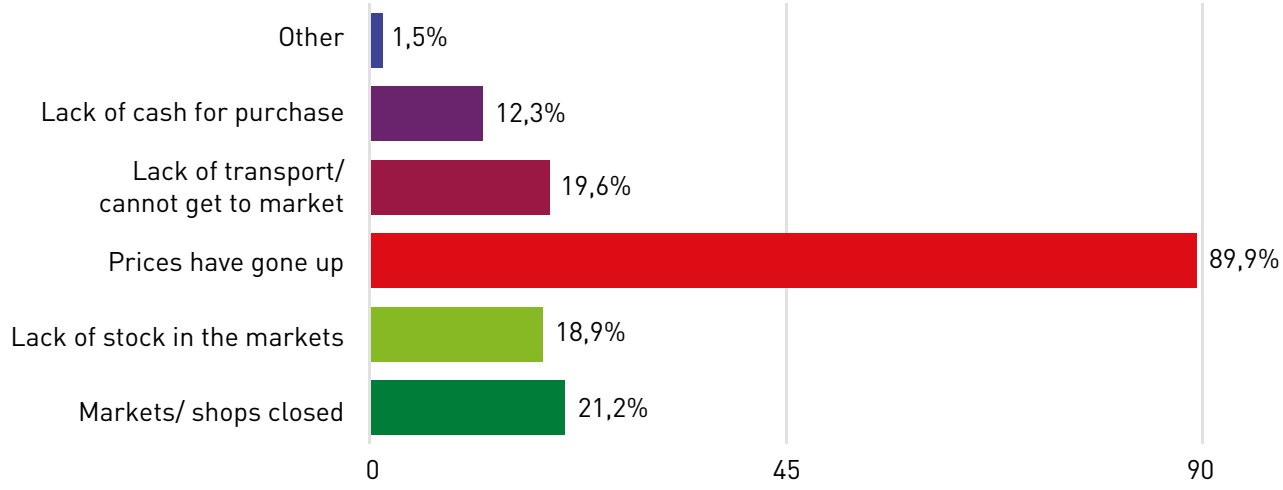
Percentage of COVID-19 affects household food access

Effect of COVID-19 on food access

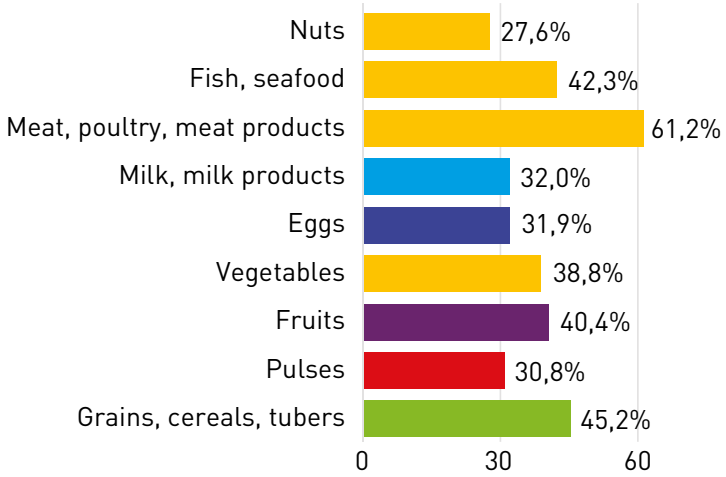


Percentage of households with effect of COVID-19 on food access

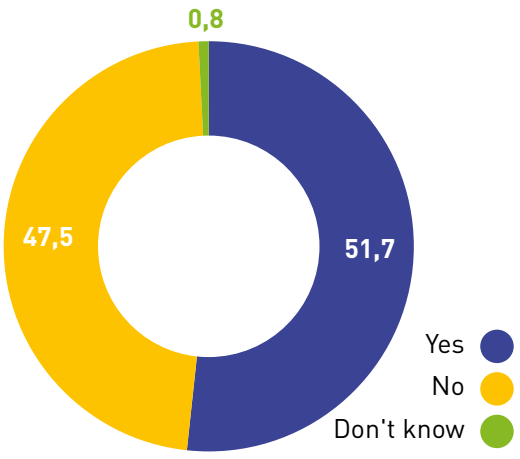
Reasons for Increased Difficulty to Buy Foods From Local Markets or Shops



Types of Main foods Less Accessible



More Difficult to Buy Foods From Local Markets or Shops Since the Onset of COVID



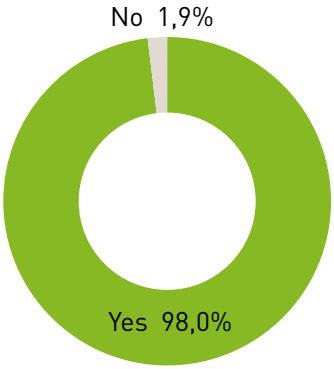
Percentage of household who had more difficulties to buy foods from local markets or shops since the onset of COVID

Key Messages

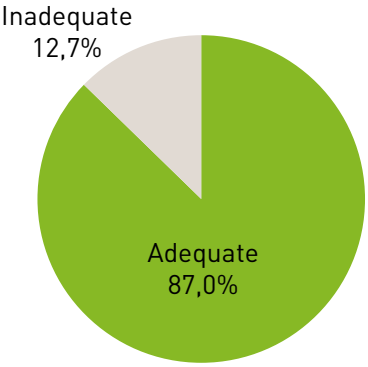
- Only about 25% of households reported changing their eating behavior during the pandemic.
- Less than one-third of households reported any effects of COVID-19 on food access
- The main type of food that is reported less accessible is meat, poultry and meat products.
- The majority reported that costs of food have increased since the COVID-19 outbreak.

Water and sanitation

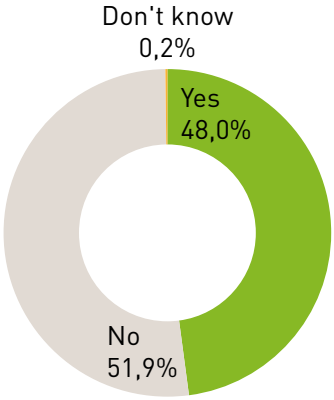
Drink safe water



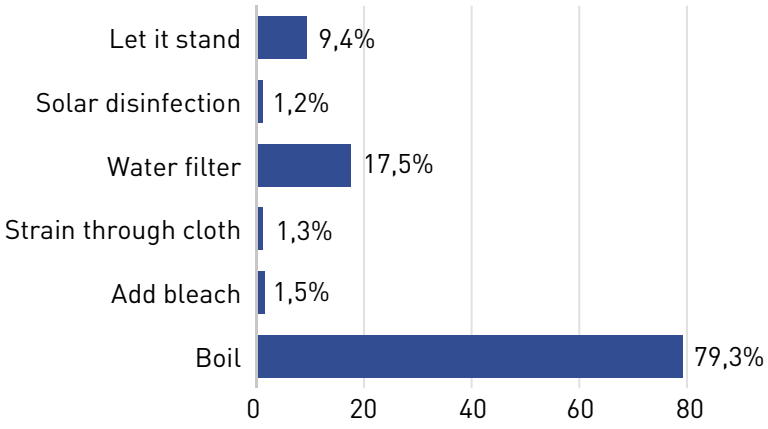
Household sanitation



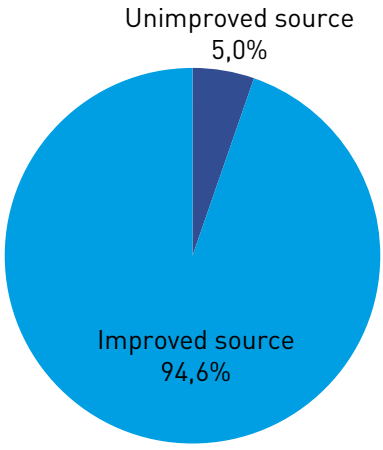
Treat water to make safe to drink



Treatment method



Main source of water for drinking

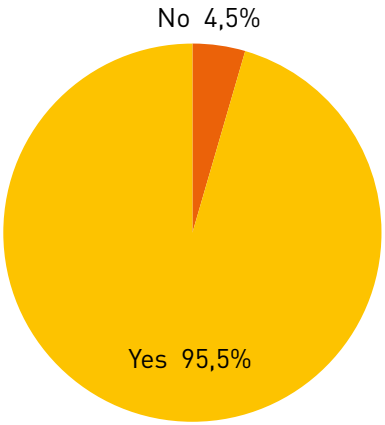


Key Messages

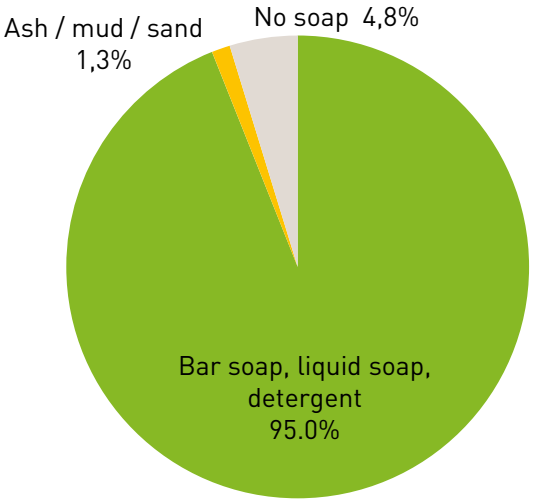
- Almost 95% of the households have an improved source of water for drinking.
- About half of the households reported treating their water to make it safe to drink.

Handwashing

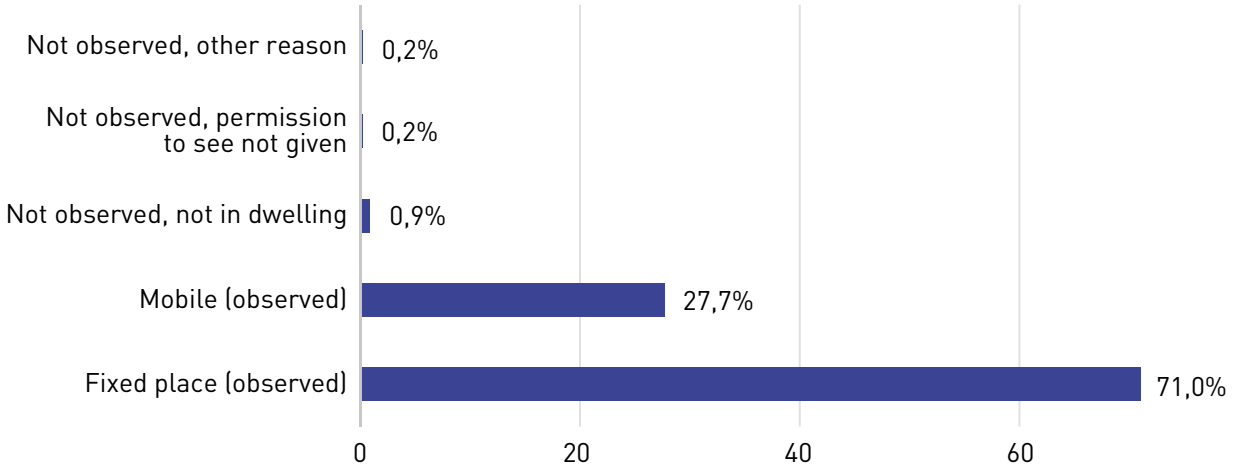
Location of handwashing site



Soap seen at handwashing site



Water is available at observed handwashing place



Key Messages

- About 70% of the households have a fixed sink or basin for handwashing, and the remaining households wash hands elsewhere in or around the dwelling
- Almost all households had water available at the handwashing site and had some kind of soap at the handwashing site at the time of the survey

Infant and Young Child Feeding Indicators

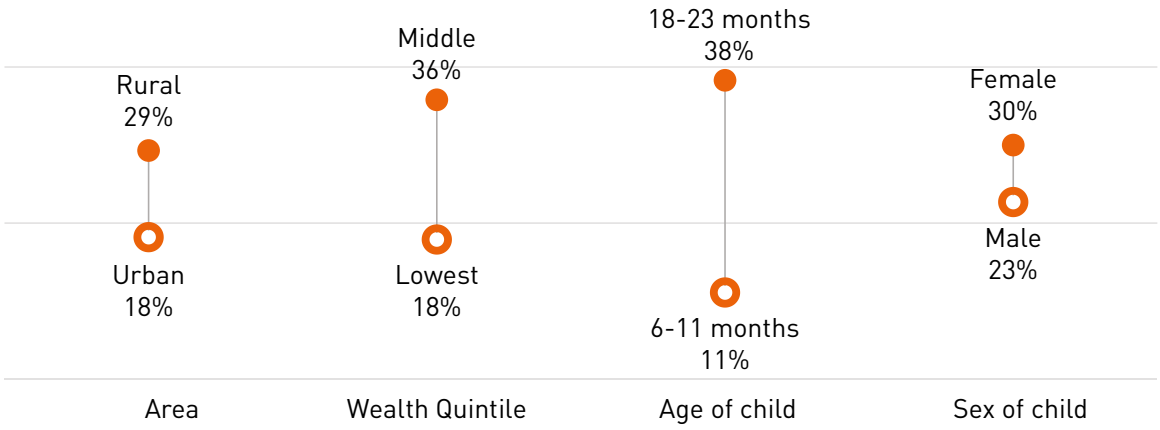
Indicators	Yes %	No %
Ever breastfed (Indicator #1)	96,9	2,8
Early initiation of breastfeeding (Indicator #2)	91,8	7,7
Exclusively breastfed for the first two days after birth (Indicator #3)	77,1	21,8
Continued breastfeeding at 1 year (12-23 months of age; Indicator #6)	50	45,3
Introduction of solid foods (6-8 months; Indicator #7)	74,5	25,5
Minimum dietary diversity (Indicator #8)	26,2	73,8
Minimum meal frequency (Indicator #9)	64,3	35,7
Minimum milk feeding frequency for non-breastfed children (Indicator #10)	53,7	46,3
Minimum acceptable diet (Indicator #11)	15,3	84,7
Egg and/or flesh food consumption (Indicator #12)	73,1	26,9
Sweet beverage consumption (Indicator #13)	70	30
Zero vegetable or fruit consumption (Indicator #15)	18,3	81,7
Bottle fed in past 24 hours (WHO/UNICEF IYCF indicator #16)	50	50

Key Messages

- Almost all surveyed children 6023 months of age had ever been breastfed
- More than 90% pf children were breastfed immediately after birth.
- Less than one-third of children had consumed 5 or more food groups in the past 24 hours prior to the survey
- Only about 15% receive a minimum acceptable diet.

Dietary Diversity,Children 6-23 months

Dietary Diversity among children aged 6-23 months, by socio-economic demographic characteristics



Dietary Diversity among children aged 6-23 months by Region

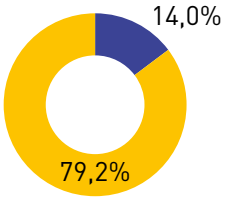
Region	Consumed 5+ food groups (%)	Mean dietary score
National	**489**	**4,5**
Batken	36,8	4,9
Jalal-Abad	27	4,7
Issyk-Kul	39,1	4,9
Naryn	31,6	4,8
Osh	30	4,3
Talas	32,4	4,8
Chui	12,8	4,3
Bishkek c.	9,7	3,7
Osh c.	29	4,4

Key Messages

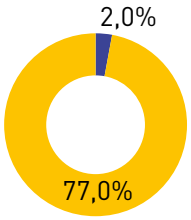
- The proportion of children with minimal dietary diversity increases with age
- Minimum dietary diversity is significantly higher among children in rural areas.
- The lowest levels of minimum dietary diversity were found in Bishkek and Chui.
- Highest levels of minimum dietary diversity were found in Issyk-Kul and Batken.

COVID-19 Effects on Child Feeding Practices, Children 6-59 Months

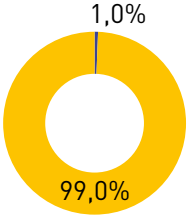
Effect of COVID-19 Pandemic on Child Feeding Practices on Children 6-59 months



Did caregiver receive message on IYCF in the context of COVID-19



Stopped breastfeeding or did not start because of COVID pandemic



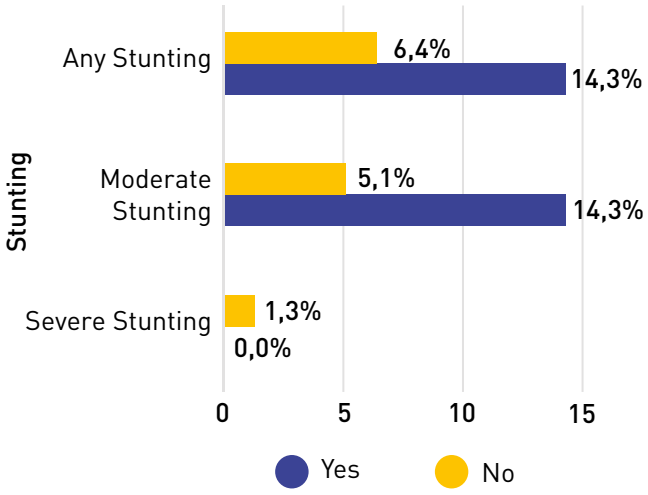
Received donated infant formula since COVID pandemic started

Increase or decrease of quantity or frequency of following foods

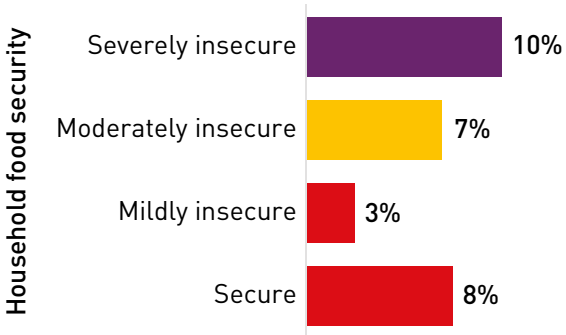
Foods	Increase	Decrease
Infant formula, growing up milks	22,4	77,6
Sweetened drinks	31,5	68,5
Porridge or cereals-based food	35,6	64,4
Meat/fish/chicken or other meats	37,6	62,4
Eggs	32,2	67,8
Plant-based proteins such as lentils, beans, chickpeas	16,6	83,4
Fruits and vegetables	44,2	55,8
Packaged sweet and salty foods	31,4	68,6

Stunting, Children 6-59 months

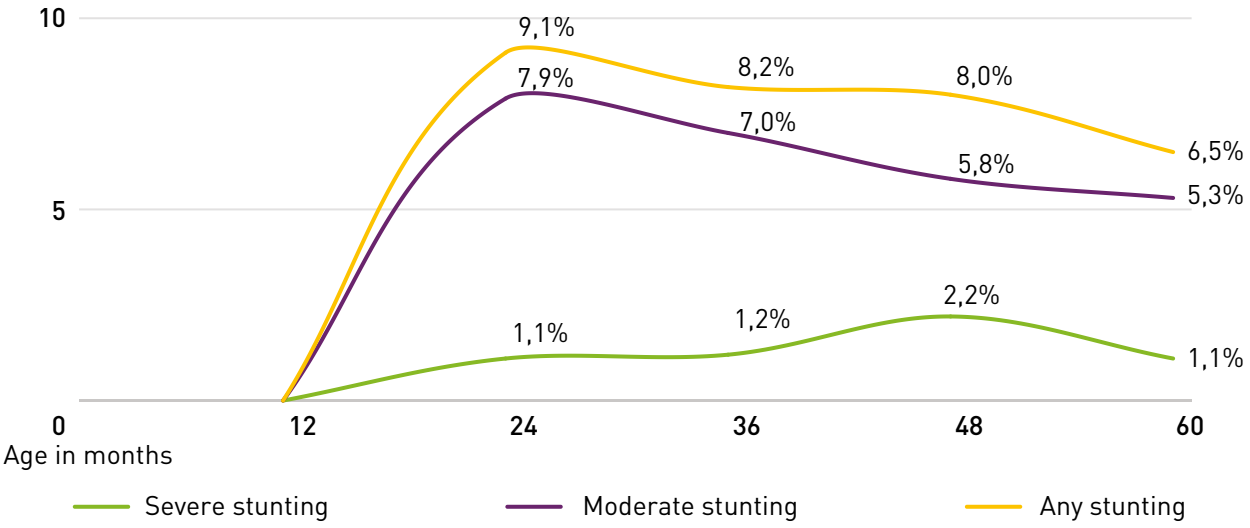
Prevalence of stunting among children 6-59 months by low birth weight



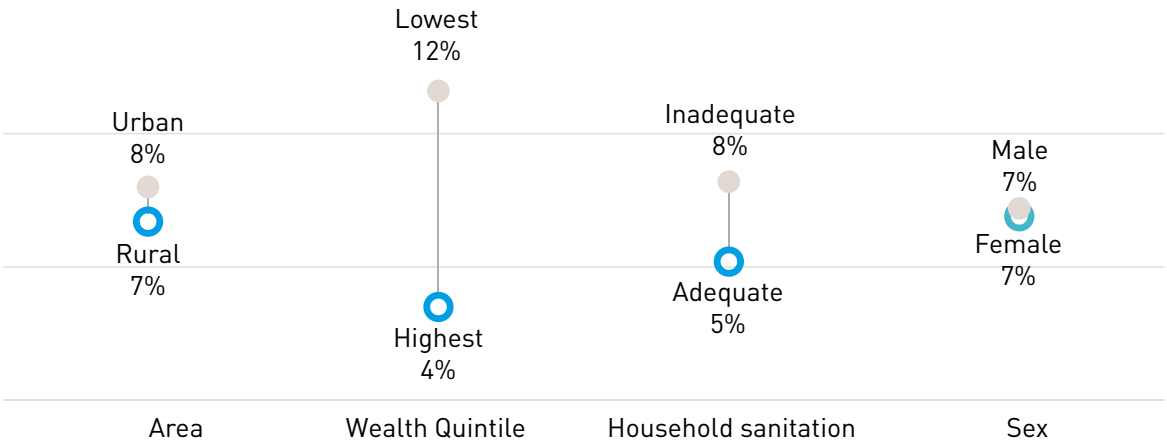
Prevalence of any stunting among children 6-59 months by household food security



Prevalence of stunting among children 6-59 months by age in months



Prevalence of any form for stunting among children 6-59 months by socio-economic demographic characteristics



Prevalence of any form for stunting among children 6-59 months by region

Region	Severe stunting	Moderate stunting	Any stunting
National	**1,2**	**5,8**	**7,0**
Batken	1,1	11,1	12,3
Jalal-Abad	2,3	3,9	6,1
Issyk-Kul	3,1	3,1	6,2
Naryn	2,1	5,2	7,3
Osh	1,2	7,9	9,1
Talas	0	4	4
Chui	0	2,9	2,9
Bishkek c.	0	6,4	6,4
Osh c.	1,6	6,6	8,2

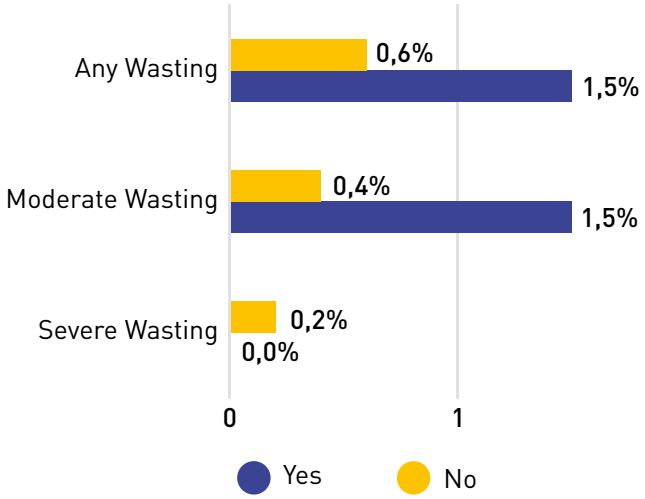
Key Messages

- The national prevalence of stunting can be classified as low
- The prevalence is classified as medium among children residing in severely food insecure households.
- Children living in poor households are more likely to be stunted than those living in wealthier quintiles
- Stunting prevalence can be classified as medium in Batken

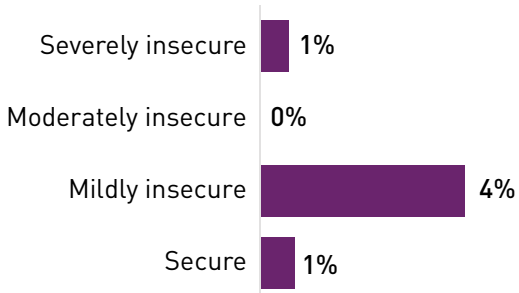
Data from this snapshot can be found in figure 10 and table 27

Wasting, Children 6-59 months

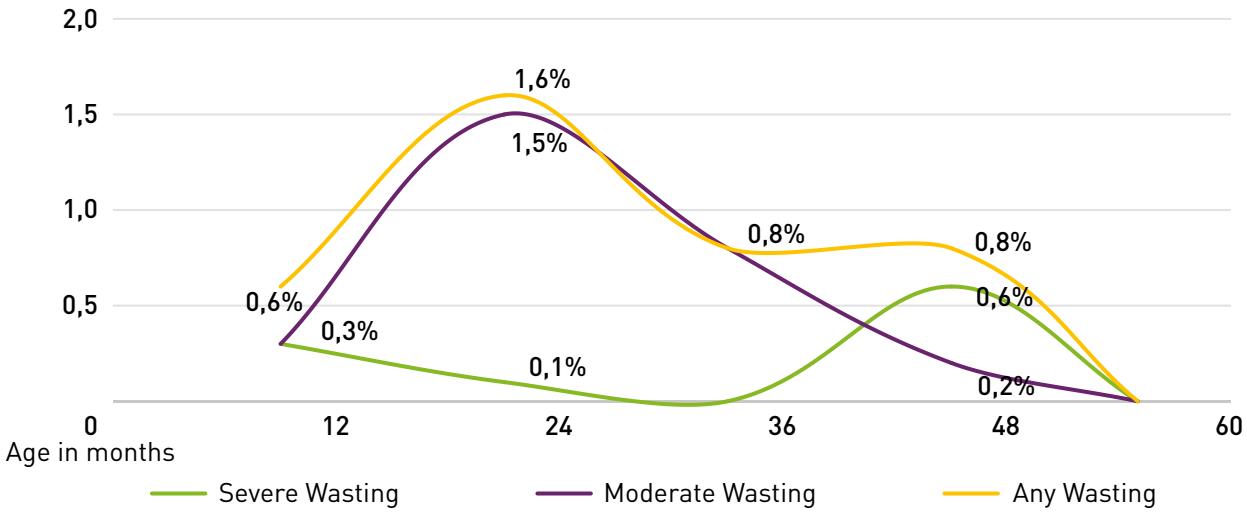
Prevalence of Wasting among children 6-59 months by low birth weight



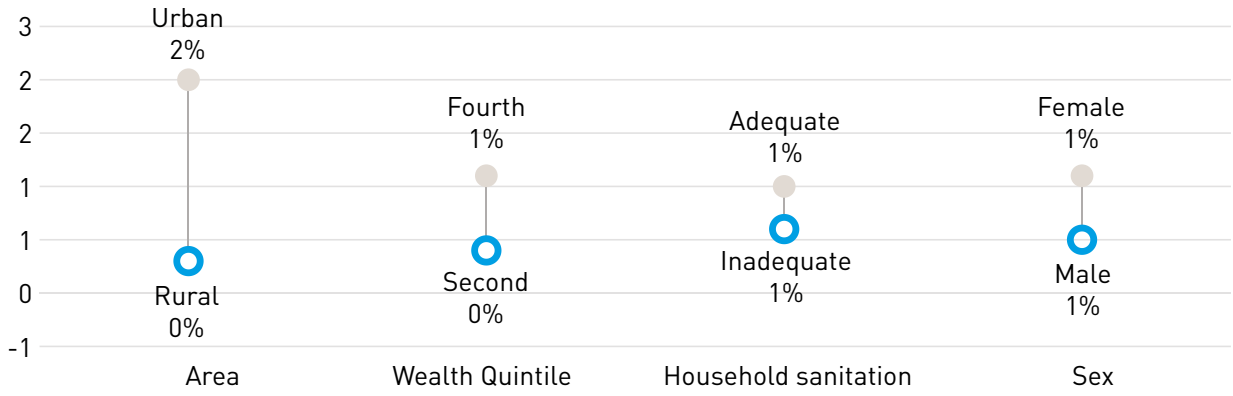
Prevalence of Wasting among children 6-59 months by household food security



Prevalence of Wasting among children 6-59 months by age in months



Prevalence of Wasting among children 6-59 months by socio-economic demographic characteristics



Prevalence of Wasting among children 6-59 months by region

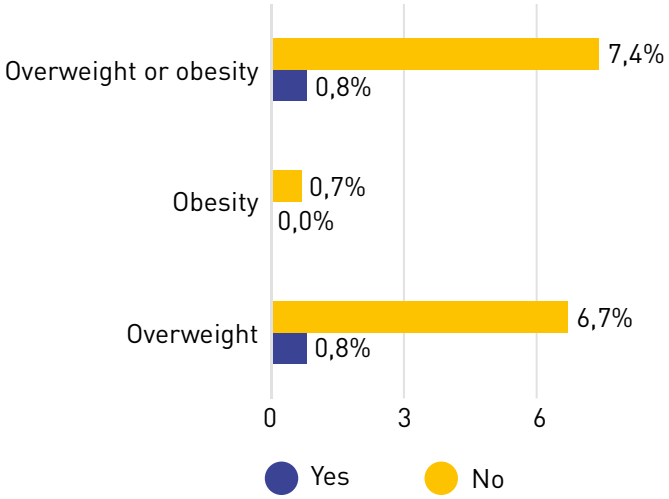
Region	Острое истощение	Умеренное истощение	Любое истощение
National	**0,2**	**0,6**	**0,8**
Batken	0	0,5	0,5
Jalal-Abad	0	0,6	0,6
Issyk-Kul	0,7	0	0,7
Naryn	3,3	2,5	5,8
Osh	0	0	0
Talas	0	0	0
Chui	0	1,8	1,8
Bishkek c.	0	0	0
Osh c.	0	0	0

Key Messages

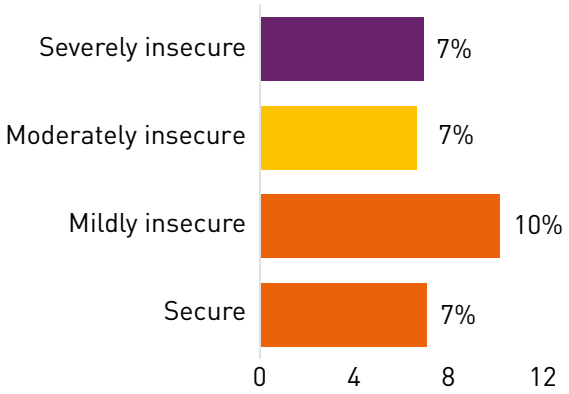
- National prevalence of wasting among children aged 6-59 months is classified as low
- Children living in urban areas are more likely to be wasted compared to children in rural areas
- Wasting is significantly higher in Naryn
- Children living in mildly food insecure households have a higher prevalence of wasting

Overweight and Obesity, Children 6-59 months

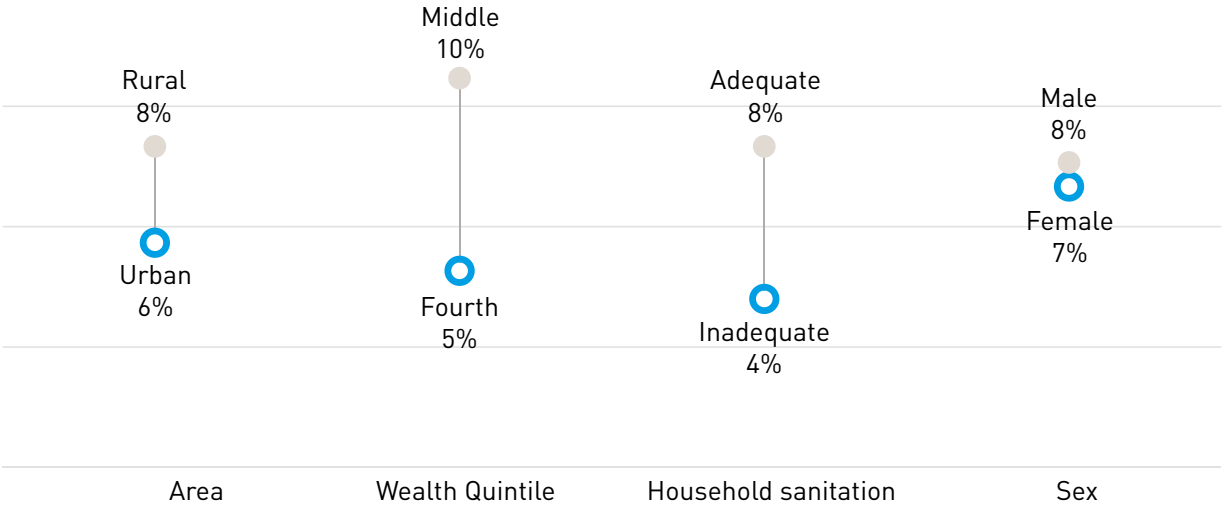
Prevalence of overweight and obesity in children 6-59 months by low birth weight



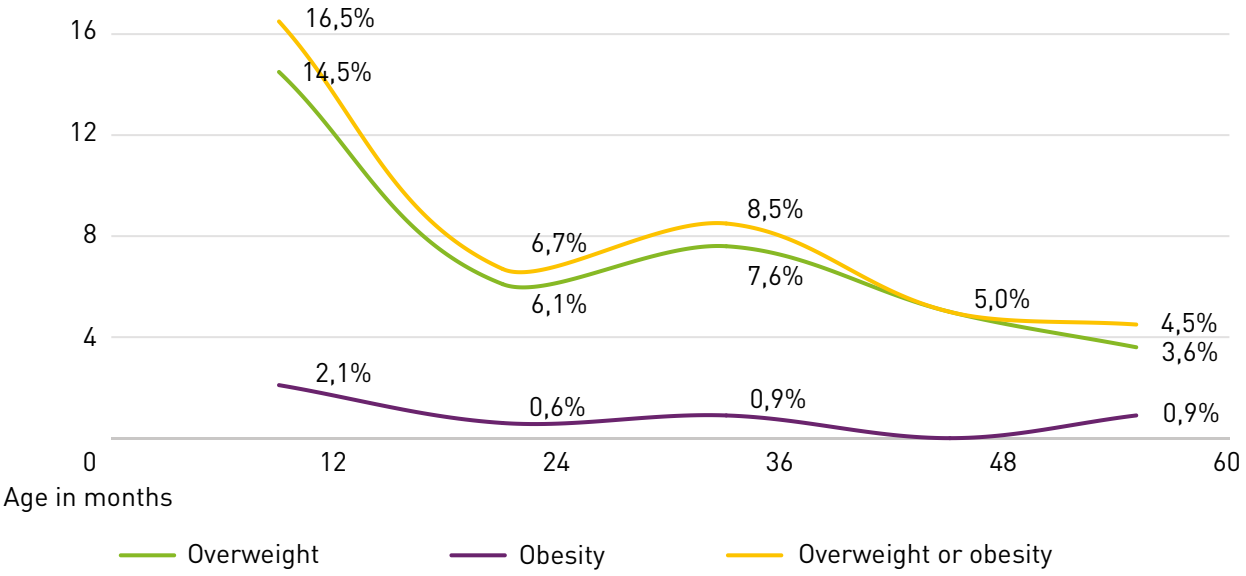
Prevalence of overweight and obesity in children 6-59 months by household food security



Prevalence of overweight and obesity in children 6-59 months by socio-economic demographic characteristics



Prevalence of overweight and obesity in children 6-59 months by age in months



Prevalence of overweight and obesity in children 6-59 months by region

Region	Overweight	Obesity	Overweight or obesity
National	**6,5**	**0,8**	**7,3**
Batken	5	1,2	6,2
Jalal-Abad	7	0	7
Issyk-Kul	4,1	0,9	5
Naryn	9	2,1	11
Osh	10,7	1,8	12,6
Talas	6,6	0,7	7,3
Chui	3,5	0	3,5
Bishkek c.	3,8	0	3,8
Osh c.	4,2	0,4	4,6

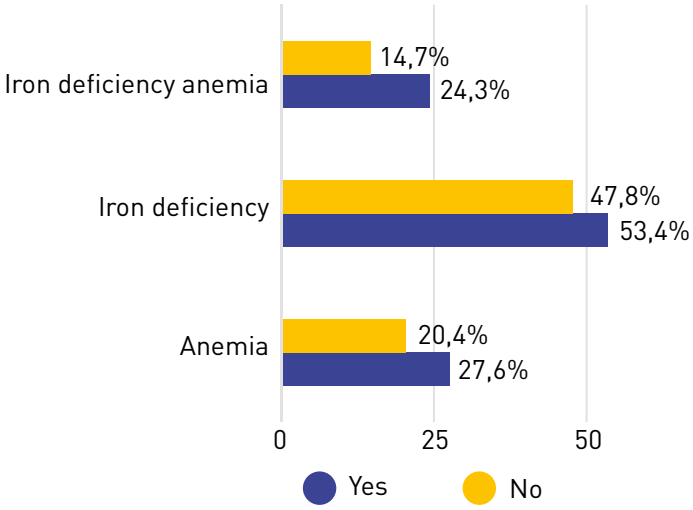
Key Messages

- The national prevalence of overweight can be classified as medium
- Children aged 6-11 months have the highest prevalence of overweight and obesity
- The highest prevalence can be found in Naryn and Osh
- The lowest prevalence can be found in Chui and Bishkek

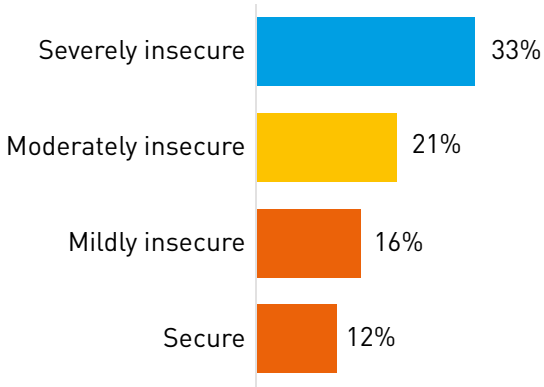
Data from this snapshot can be found in table 29

Anemia, Iron Deficiency and Iron Deficiency Anemia, Children 6-59 months

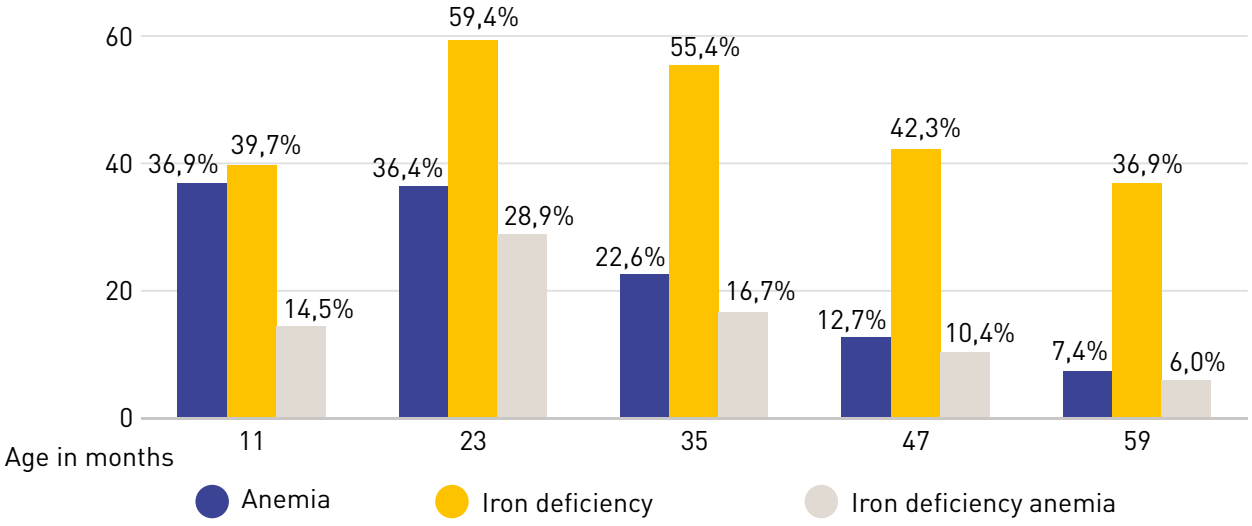
Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia in children 6-59 months by low birth weight



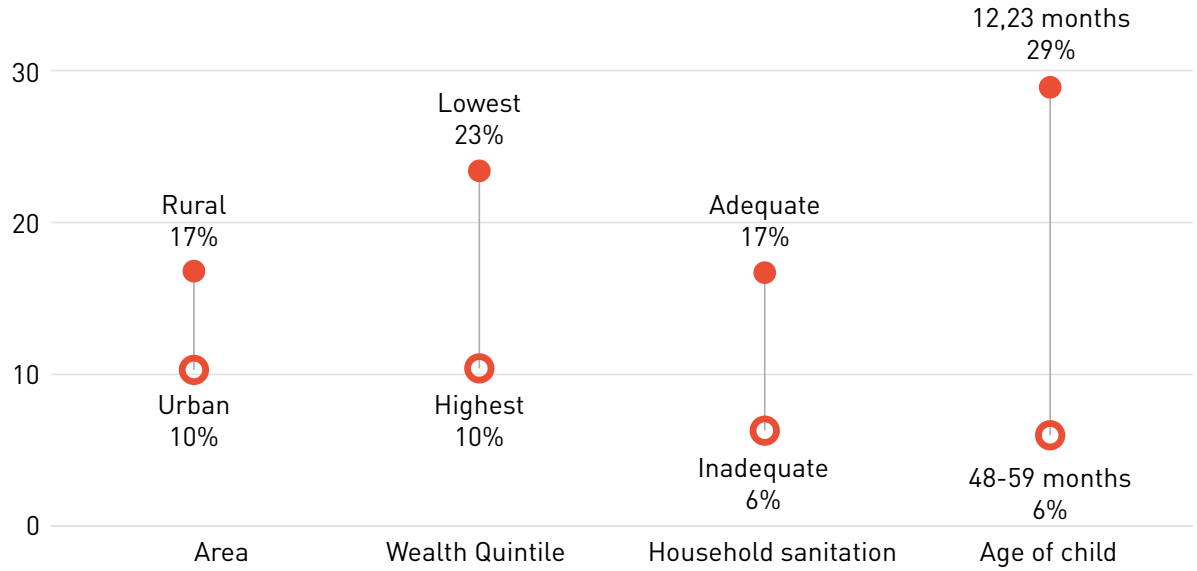
Prevalence of Iron Deficiency Anemia in children 6-59 months by household food security



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia in children 6-59 months by age in months



Prevalence of Iron Deficiency Anemia disaggregated by socio-economic demographic characteristics



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia, by region

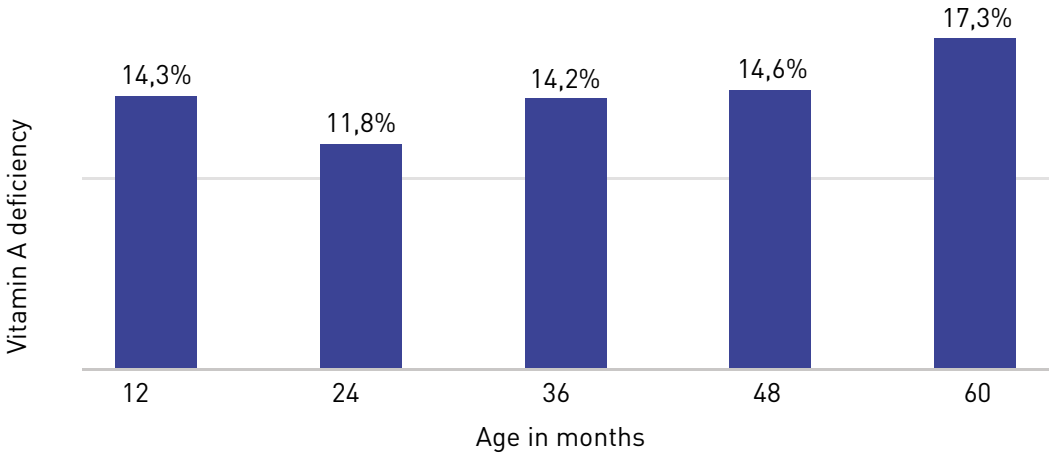
Region	Anemia %	Iron Deficiency %	Iron Deficiency Anemia %
National	**20,9**	**47,0**	**15,0**
Batken	19,9	47,4	17,6
Jalal-Abad	11	46,4	6
Issyk-Kul	33,9	44,9	21,5
Naryn	32,7	59,8	20,6
Osh	22,2	45,4	14,2
Talas	33,1	48,3	14,9
Chui	29,2	51	27,3
Bishkek c.	10,8	48	8,5
Osh c.	11,6	35,4	6,9

Key Messages

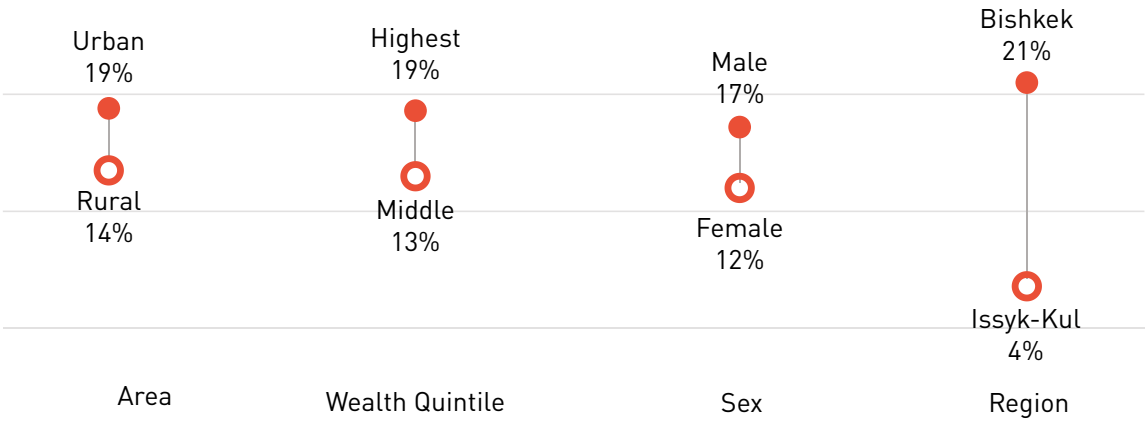
- *Anemia in children can be classified as a moderate public health problem*
- *Rural areas have a significantly higher prevalence of anemia than urban areas.*
- *Children living in the poorest households have the highest anemia prevalence, and those residing in the wealthiest households have the lowest prevalence.*

Vitamin A Deficiency, Children 6-59 months

Prevalence of Vitamin A Deficiency among children 6-59 months by age in months



Prevalence of Vitamin A Deficiency among children 6-59 months by socio-economic demographic characteristics



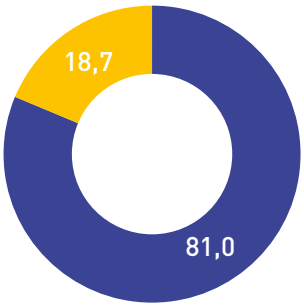
Region	N	% with VAD
National	**1161**	**15,0**
Batken	172	18
Jalal-Abad	162	12,4
Issyk-Kul	120	3,6
Naryn	140	4,4
Osh	147	19,3
Talas	86	10,1
Chui	77	14,4
Bishkek c.	73	21
Osh c.	184	19,5

Key Messages

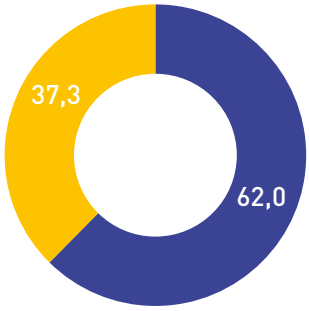
- The prevalence of vitamin A deficiency among children 6-59 months can be classified as moderate
- There is a significantly higher prevalence among male than female children
- Vitamin A deficiency can be classified as a severe public health problem in Bishkek, and close to severe in Osh and Osh City.

Schooling and School Feeding,Children 5-9 years

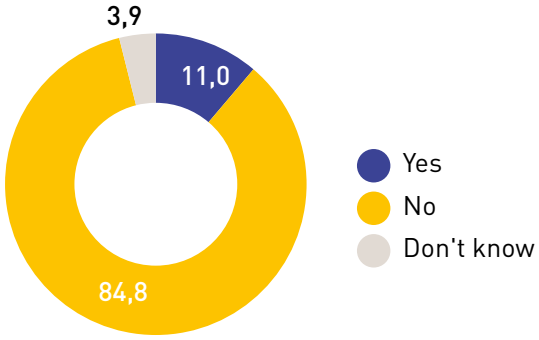
Child ever attended school



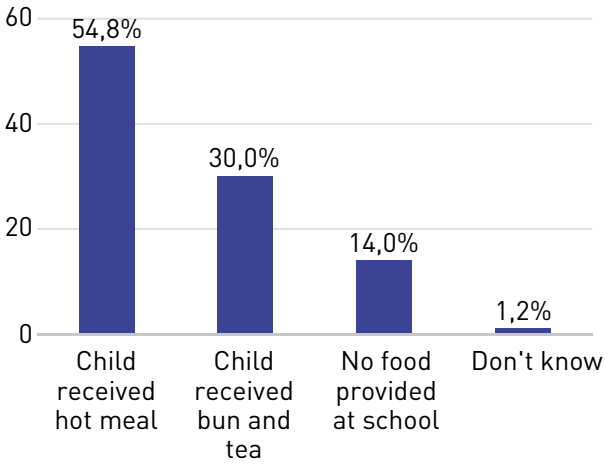
Child had home schooling due to COVID-19



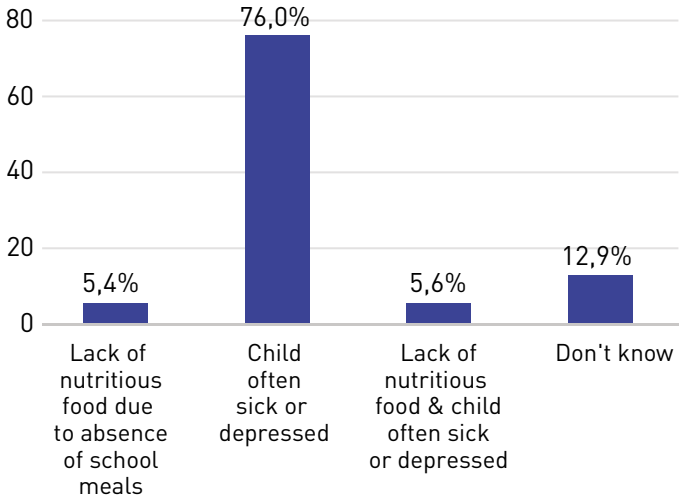
Home-schooling affected health of child



School meal provision



How was child health affected

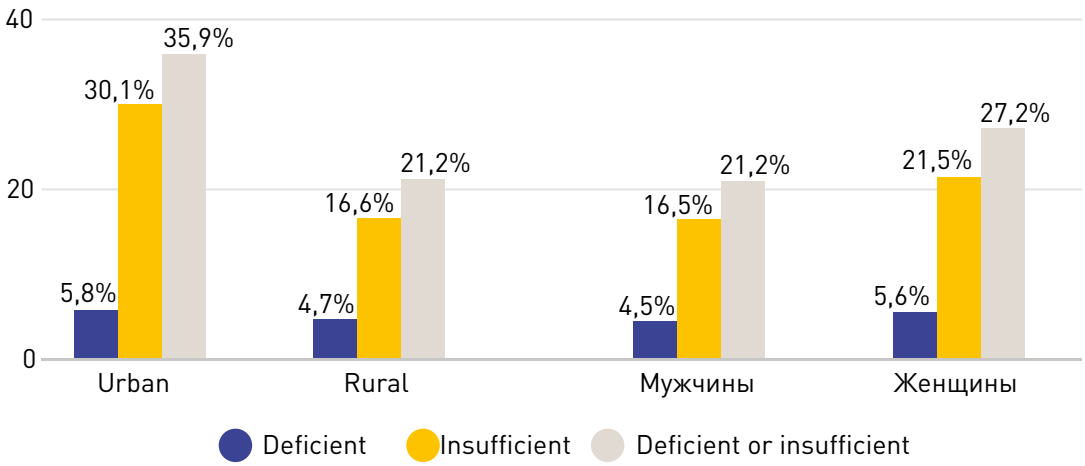


Key Messages

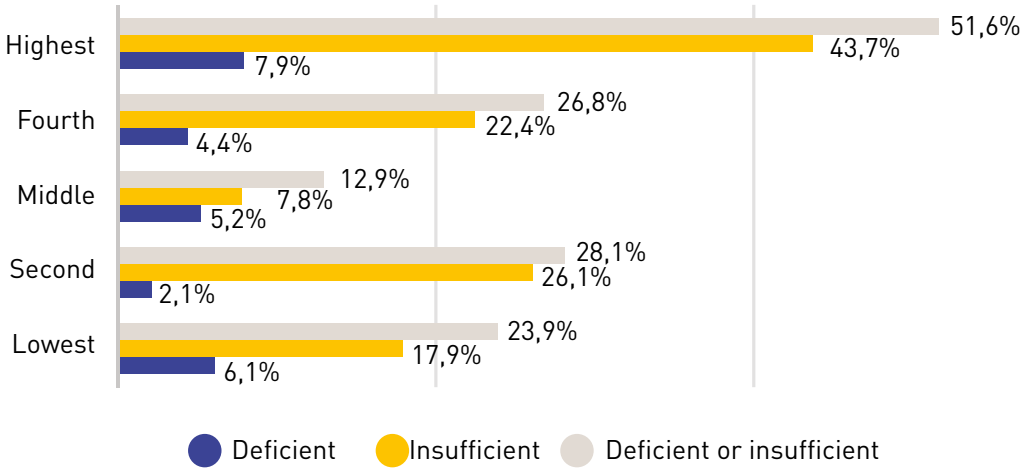
- Four out of five children ever attended school
- Of those children attending school at the time of the survey, about 85% received school meal
- Almost two-thirds of children had home schooling due to COVID

Vitamin D Deficiency,Children 6-59 months

Prevalence of Vitamin D Deficiency in Children 6-59 months by area and sex

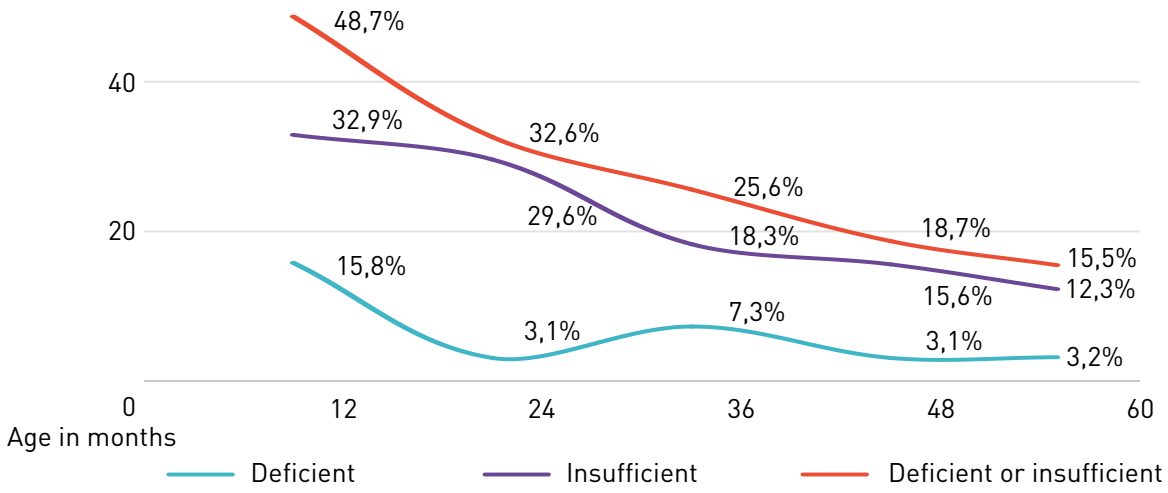


Prevalence of Vitamin D Deficiency in Children 6-59 months by wealth quintile

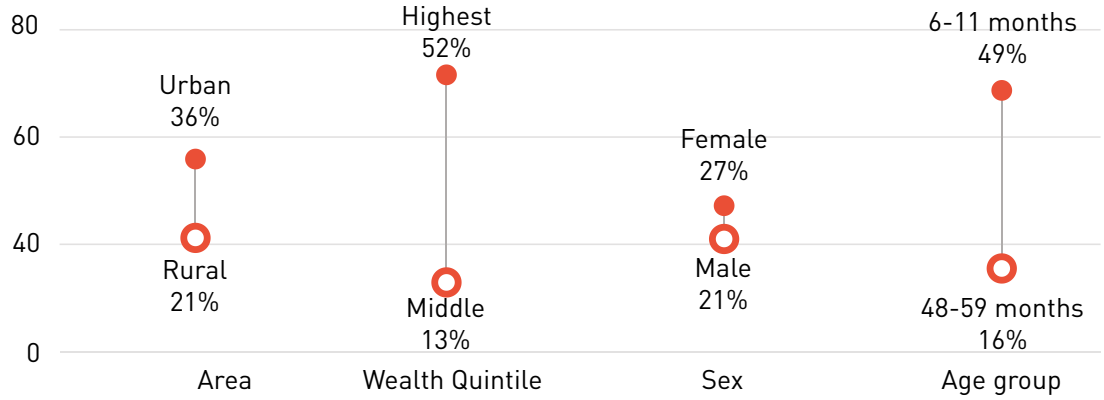


For all target groups:
Vit D deficiency: <12 ng/mL
Vit D insufficiency: ⩾12 to <20 ng/mL
Vit D deficiency AND insufficiency: <20 ng/mL

Prevalence of Vitamin D Deficiency in Children 6-59 months by age in months



Prevalence of Vitamin D Deficiency in Children 6-59 months by socio-economic demographic characteristics

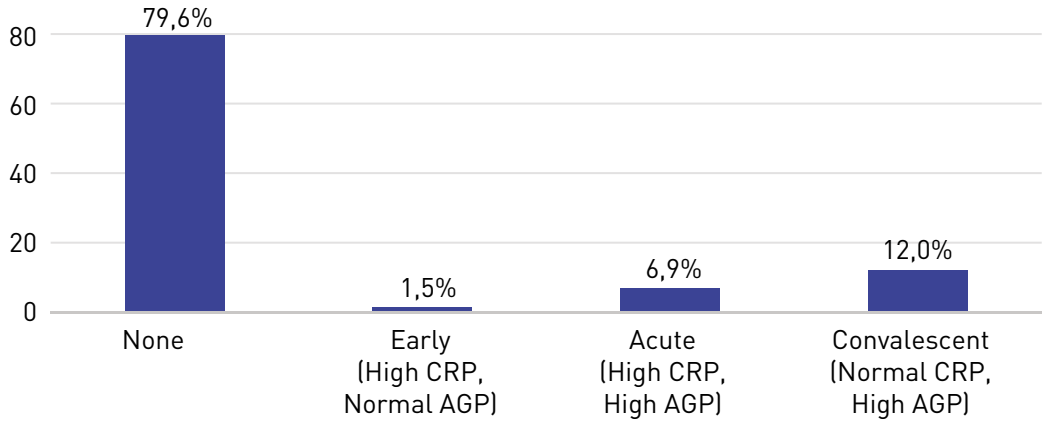


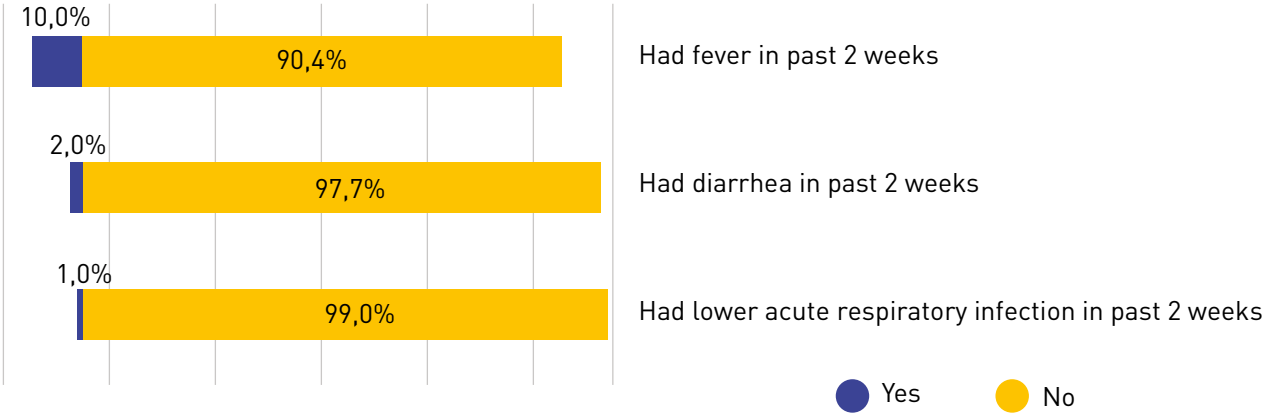
Key Messages

- A much larger proportion of children in the wealthiest households are affected by deficiency or insufficiency compared to children living in households of the other wealth quintiles
- About one-quarter of children are vitamin D deficient in the Kyrgyz Republic

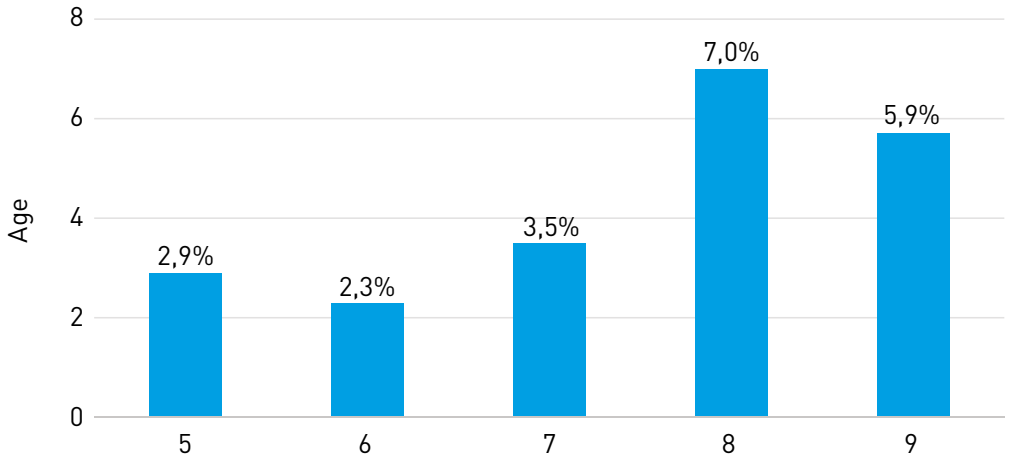
Dietary Diversity,School-Aged Children 5-9 Years

Inflammation indicators





by age group



Percentage of school age children 5-9 years of age with short stature

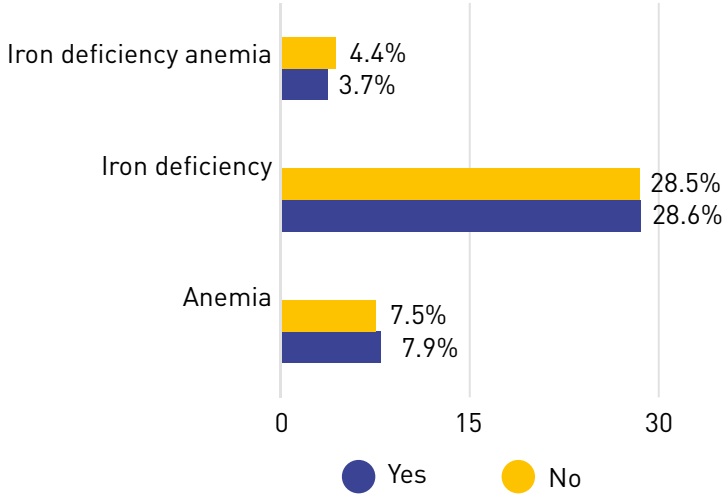
Region	N	%
National	**1430**	**4,3**
Batken	219	5
Jalal-Abad	170	3,9
Issyk-Kul	145	3,2
Naryn	165	2,4
Osh	217	5,3
Talas	162	6,3
Chui	106	5,7
Bishkek c.	83	0
Osh c.	163	4

Key Messages

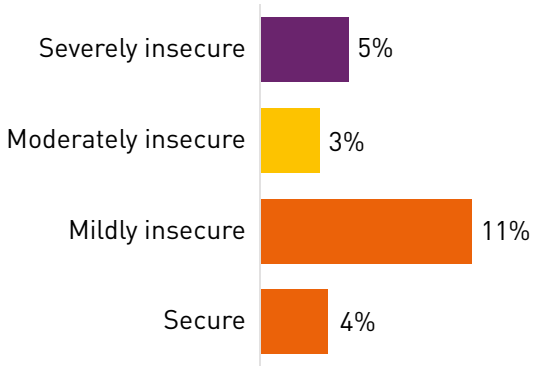
- Significant differences were detected between the regions: In Batken, Jalal Abad and Osh Oblast, approximately 80% of children consumed ⩾5 food groups, whereas in Chui and Bishkek less than half of the children consumed ⩾5 food groups
- The prevalence of overweight (BMI>25) is considered "high" by WHO guidelines
- Overweight and obesity are also significantly higher in urban areas compared to rural areas, and higher amongst children residing in the wealthiest households

Anemia, Iron deficiency, and Iron Deficiency Anemia, School Aged Children 5-9 years

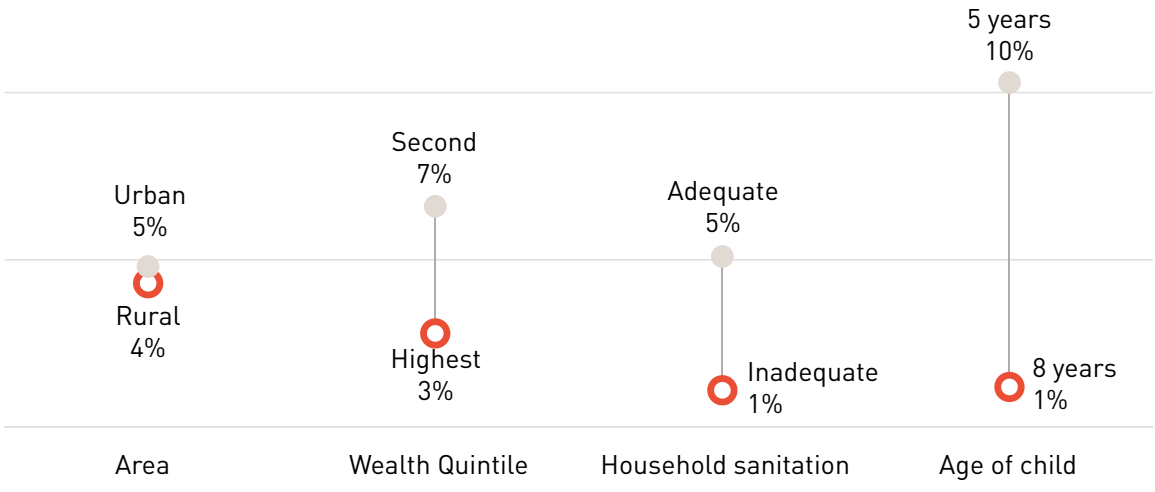
Prevalence of anemia, iron deficiency, and iron deficiency anemia in school children 5-9 years by low birth weight



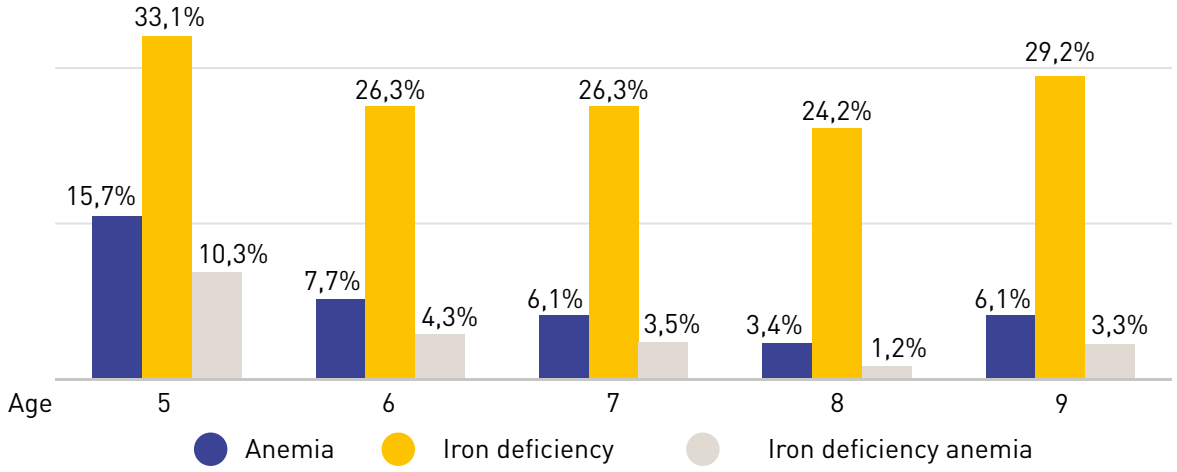
Prevalence iron deficiency anemia in school children 5-9 years by Household Food Security



Prevalence of Iron deficiency anemia among children 5-9 years by socio-economic demographic characteristics



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia among School Children 5-9 years by age



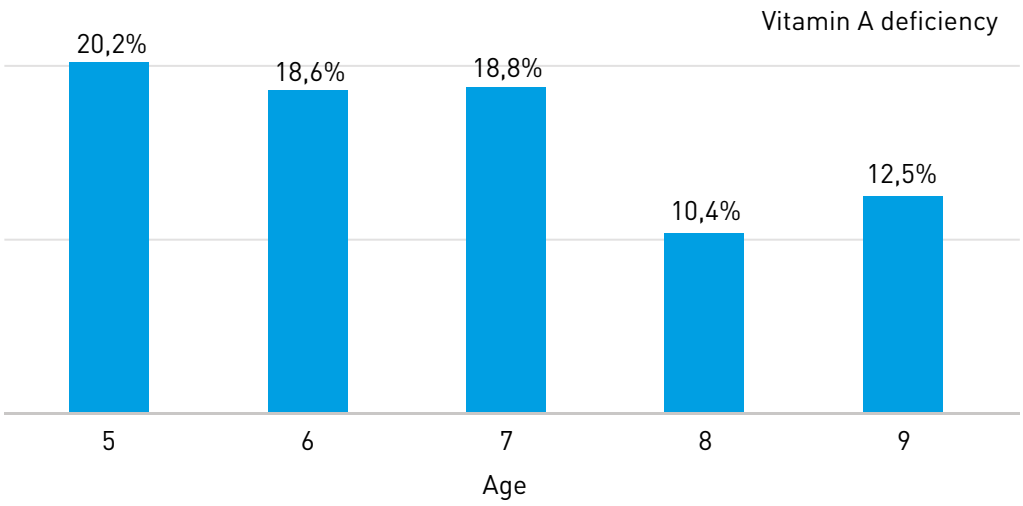
Region	Anemia %	Iron deficiency %	Iron deficiency anemia %
National	**7,8**	**29,2**	**4,5**
Batken	4,3	30,6	3,4
Jalal-Abad	4,3	26,4	2,4
Issyk-Kul	9,7	35,3	7,2
Naryn	11,1	38,6	7
Osh	8,3	23,8	3,9
Talas	14,8	31,3	8,3
Chui	9,5	32	5,1
Bishkek c.	7,1	34	4,8
Osh c.	6	25	2,4

Key Messages

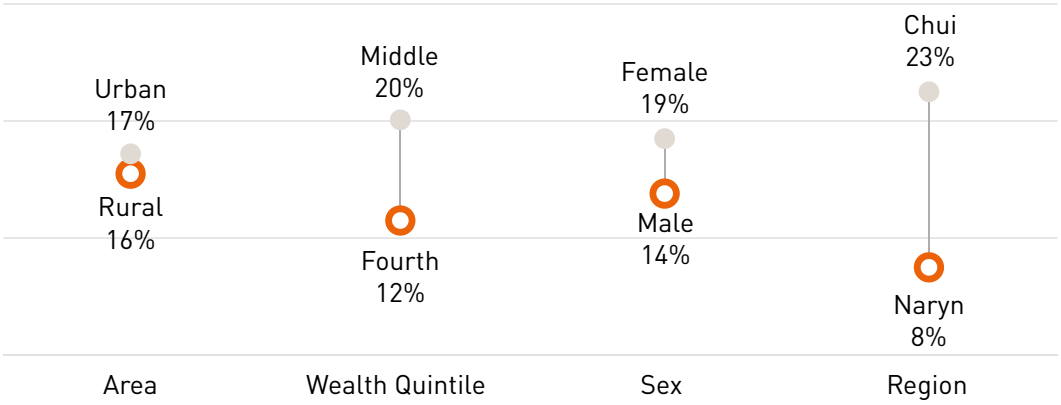
- Anemia in children 5-9 years can be considered a mild public health problem
- Anemia is significantly associated with household food insecurity, with the largest proportion of children with anemia living in mildly food insecure households.
- Anemia is strongly associated with Iron Deficiency
- Iron Deficiency Anemia is significantly associated with household food insecurity

Prevalence of Vitamin A Deficiency, School-Aged Children 5-9 years

Prevalence of Vitamin A Deficiency in Children 5-9 years by age



Prevalence of Vitamin A Deficiency in Children 5-9 years by socio-economic demographic characteristics



Prevalence of Vitamin A Deficiency in Children 5-9 years by region

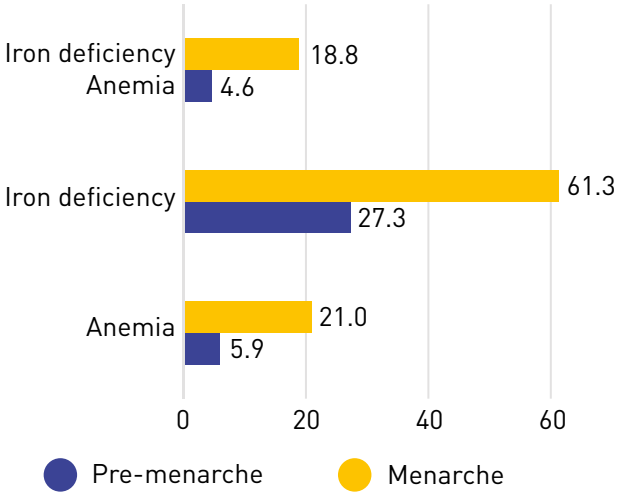
Region	N	% с дефицитом витамина А
National	**1388**	**16,0**
Batken	218	19,7
Jalal-Abad	163	8,2
Issyk-Kul	152	13,5
Naryn	158	7,5
Osh	199	18,7
Talas	158	10,9
Chui	101	22,5
Bishkek c.	83	12,3
Osh c.	156	27,5

Key Messages

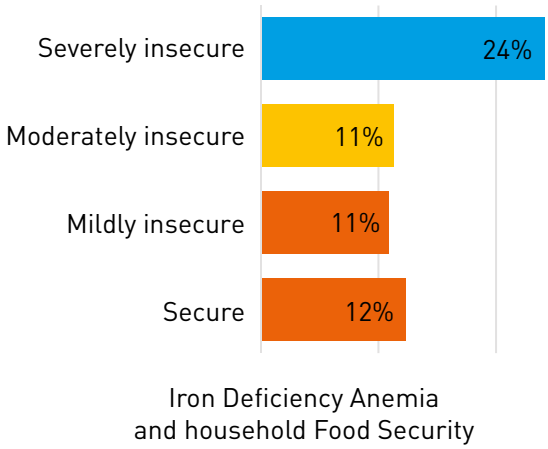
- The prevalence of vitamin A deficiency among children 5-9 years of age can be classified as moderate
- Osh City and Chui has the highest prevalence of vitamin A deficiency among children 5-9 years

Anemia, Iron Deficiency and Iron Deficiency Anemia, Adolescent Girls 10-18 Years

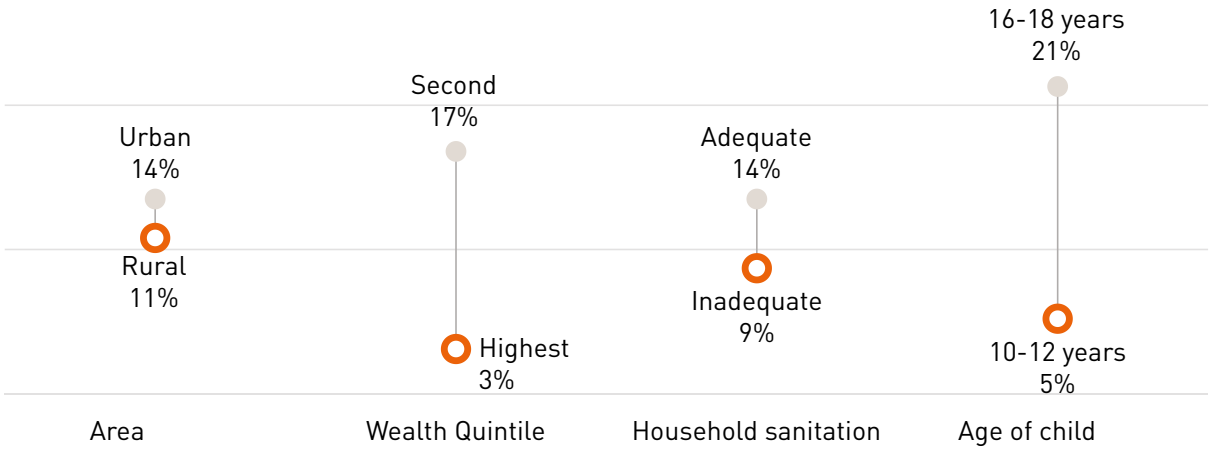
Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia in Adolescent Girls 10-18 years by menarche/pre-menarche



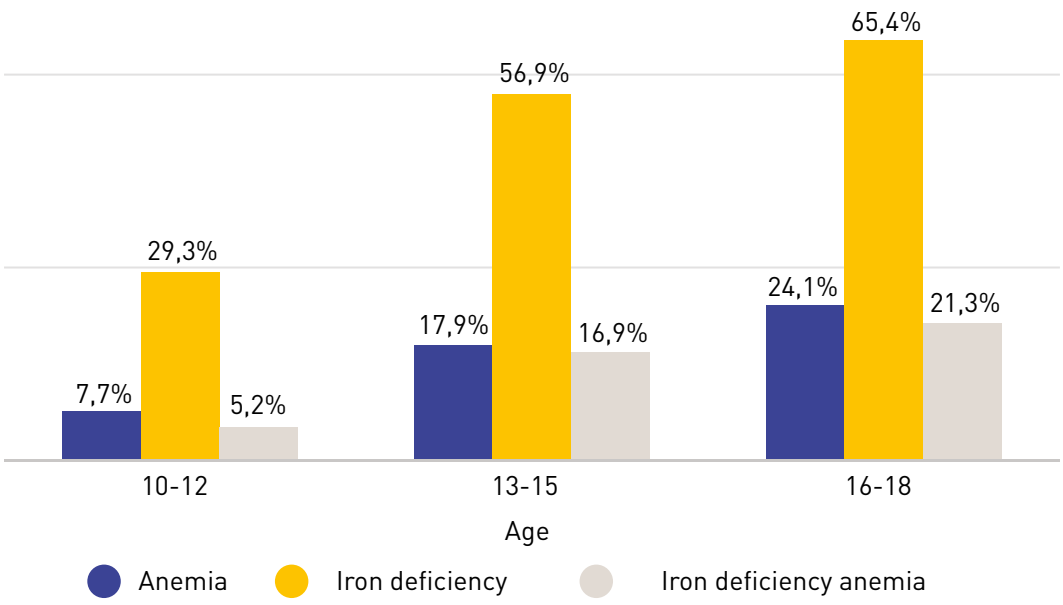
Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia in Adolescent Girls 10-18 years household food security



Prevalence of Iron Deficiency Anemia among adolescent girls 10-18 years by socio-economic characteristics



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia in Adolescent Girls 10-18 years by age group



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia in Adolescent Girls 10-18 years by region

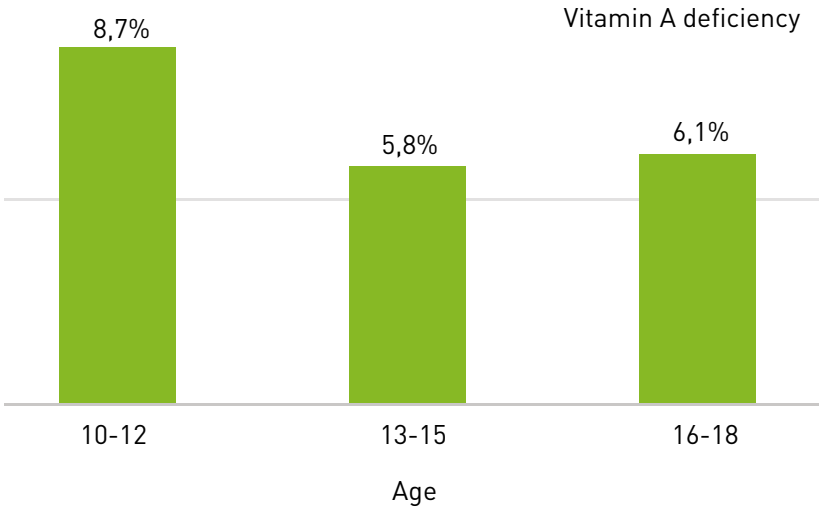
Region	Anemia %	Iron deficiency %	Iron deficiency anemia %
National	**14,6**	**46,5**	**12,7**
Batken	15,9	42,1	15,5
Jalal-Abad	16	44,6	13,5
Issyk-Kul	16,7	44,8	11,9
Naryn	15,9	48,4	13,3
Osh	8,6	43,4	9,4
Talas	16,4	59,1	14,4
Chui	18,3	48,4	18,7
Bishkek c.	15,5	53,5	7,2
Osh c.	12,9	43,8	6,9

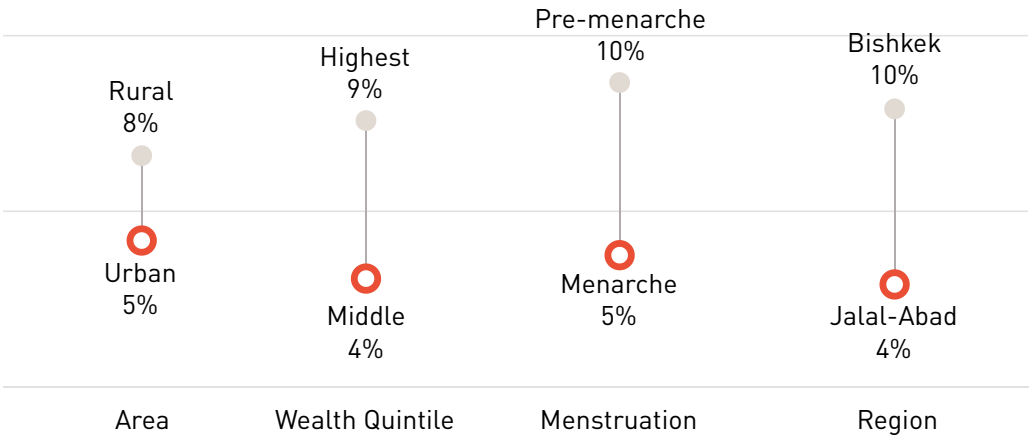
Key Messages

- About 15% of adolescent girls have anemia.
- According to WHO, the anemia prevalence in girls aged 16-18 years and menarche can be classified as moderate.

Vitamin A Deficiency, Adolescent Girls 10-18 Years

Prevalence of vitamin A deficiency in adolescent girls 10-18 years, by selected demographic characteristics





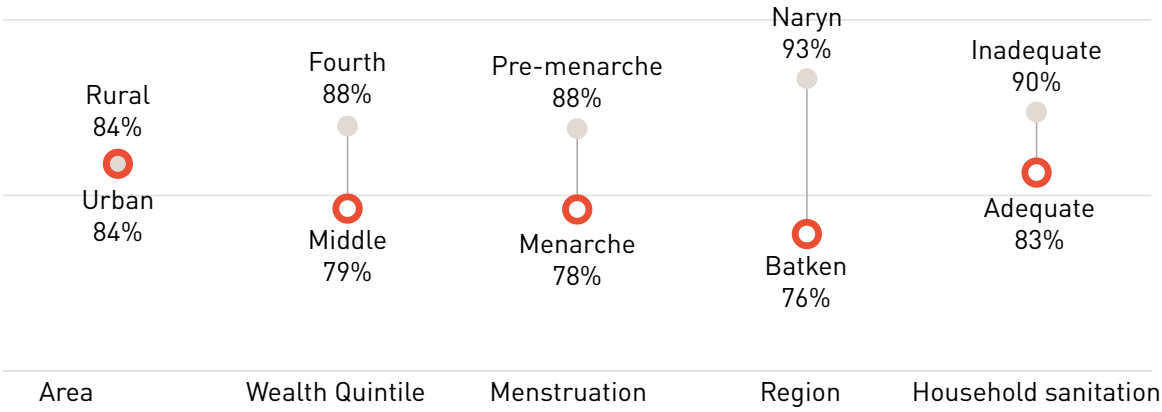
Region	N	% with Vitamin A Deficiency
National	**822**	**7,5**
Batken	102	15
Jalal-Abad	103	3,5
Issyk-Kul	89	8,4
Naryn	150	4,6
Osh	113	7,4
Talas	81	4,9
Chui	61	6,3
Bishkek c.	35	9,5
Osh c.	88	9,1

Key Messages

- Vitamin A deficiency is significantly higher in pre-menarche girls compared to menarche
- The prevalence of vitamin A deficiency can be considered a moderate public health problem in Batken, Bishkek and Osh City

Folate Deficiency,Adolescent Girls 10-18 years

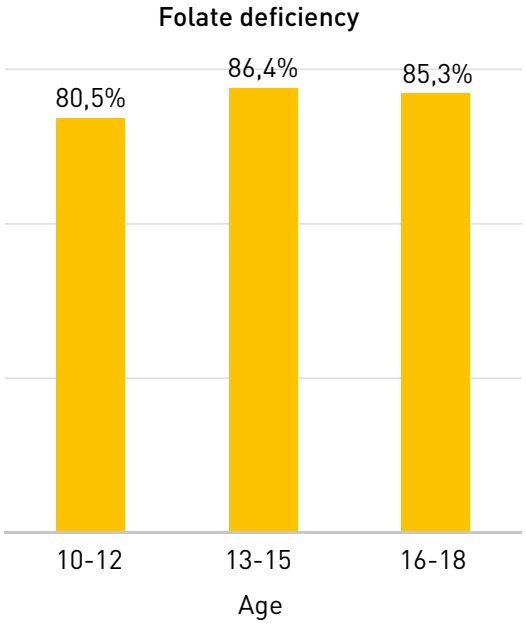
Prevalence of folate deficiency in adolescent girls 10-18 years, by socio-economic demographic characteristics



Prevalence of folate deficiency in adolescent girls 10-18 years, by region

Region	N	% with Folate Deficiency
National	**824**	**83,6**
Batken	104	75,6
Jalal-Abad	100	79,1
Issyk-Kul	90	86,9
Naryn	148	93,3
Osh	112	77,4
Talas	83	88,7
Chui	62	91
Bishkek c.	35	89,7
Osh c.	90	81,8

Prevalence of folate deficiency in adolescent girls 10-18 years by age group

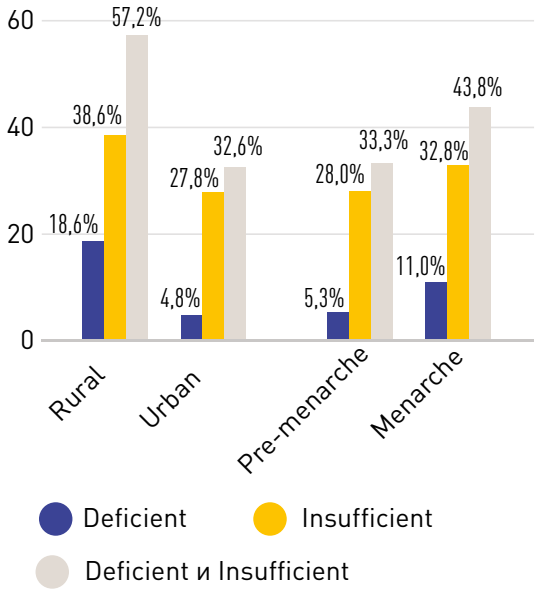


Key Messages

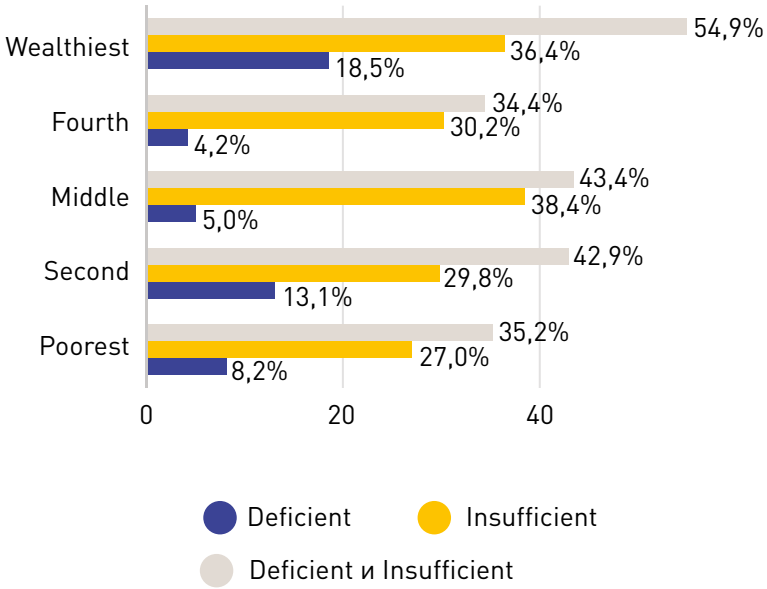
- Folate deficiency affects more than 4 out of 5 girls in the Kyrgyz Republic.
- More than 9 out of 10 girls are folate deficient in Naryn and Chui

Vitamin D Deficiency, Adolescent Girls 10-18 Years

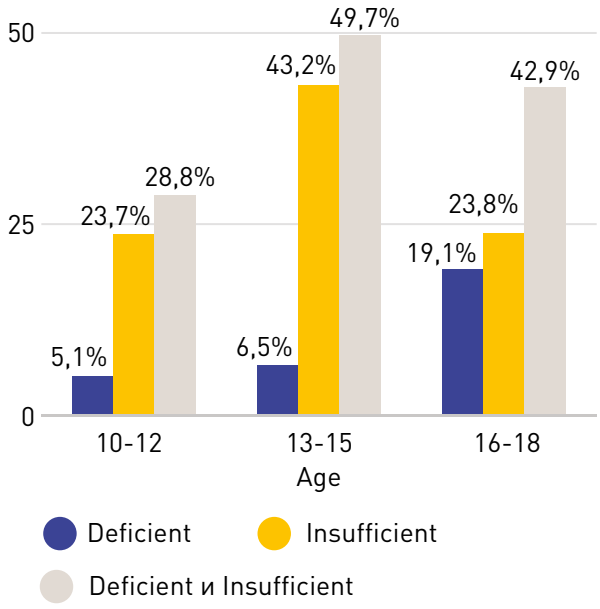
Prevalence of vitamin D deficiency in adolescent girls 10-18 years, by urban/ rural and menarche/pre-menarche



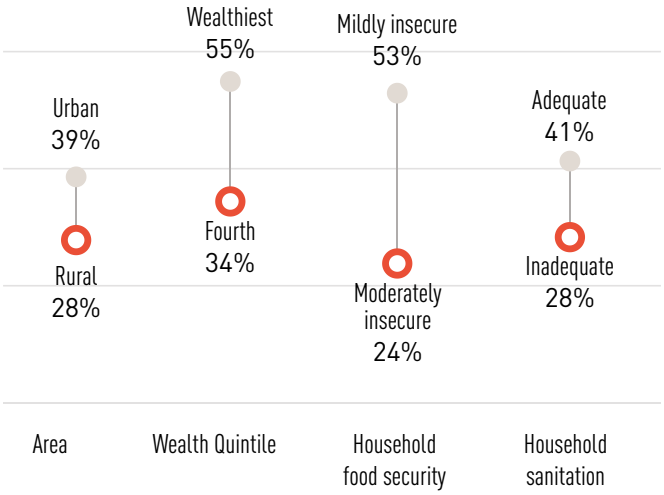
Prevalence of vitamin D deficiency in adolescent girls 10-18 years, by wealth quintile



Prevalence of vitamin D deficiency in adolescent girls 10-18 years, by age group



Prevalence of vitamin D deficiency in adolescent girls 10-18 years, by socio-economic demographic characteristics

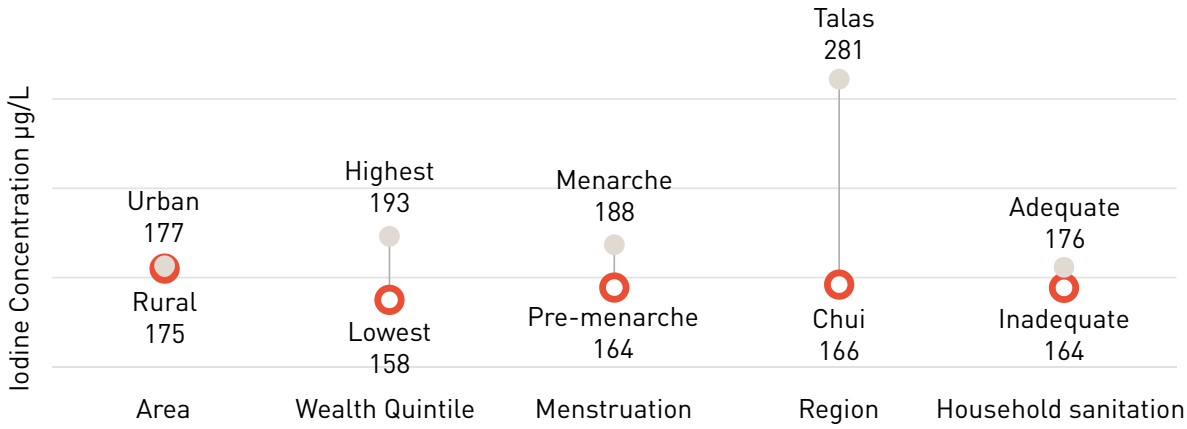


Key Messages

- About 40% of adolescent girls are vitamin D deficient or insufficient
- The prevalence of vitamin D deficiency or insufficiency is twice as high in urban areas than rural areas

Urinary Iodine Concentration, Adolescent Girls 10-18 Years

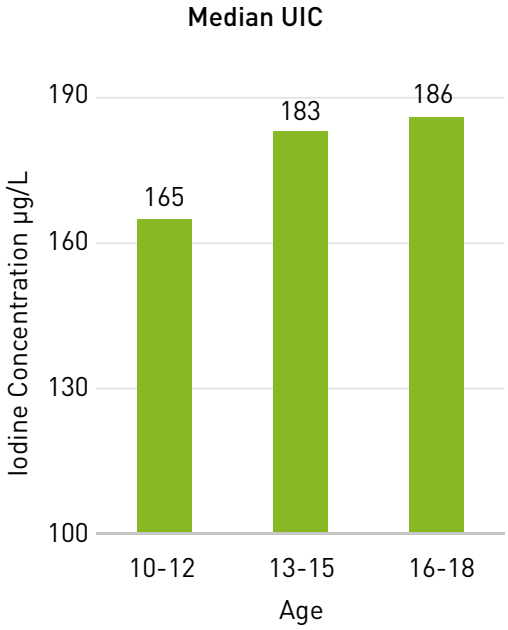
Median urinary iodine concentration in adolescent girls 10-18 years by socio-economic demographic characteristics



Median urinary iodine concentration in adolescent girls 10-18 years by region

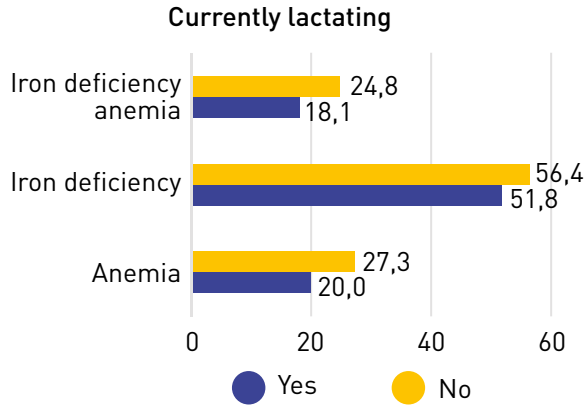
Region	N	Median UIC
National	**801**	**175,05**
Batken	105	171,87
Jalal-Abad	100	182,33
Issyk-Kul	90	221,5
Naryn	156	169,33
Osh	110	171,45
Talas	70	281,08
Chui	62	166,1
Bishkek c.	26	167,76
Osh c.	82	178,78

Median urinary iodine concentration in adolescent girls 10-18 years by age group

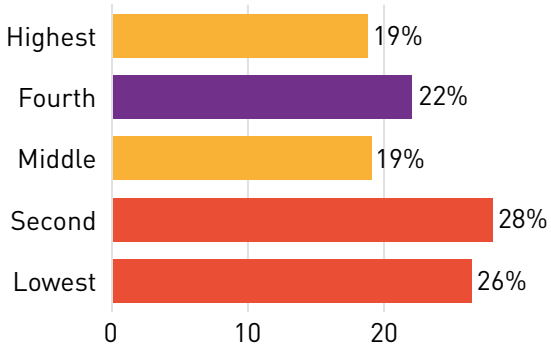


Anemia, Iron Deficiency, and Iron Deficiency Anemia, Non-Pregnant Women 15-49 Years

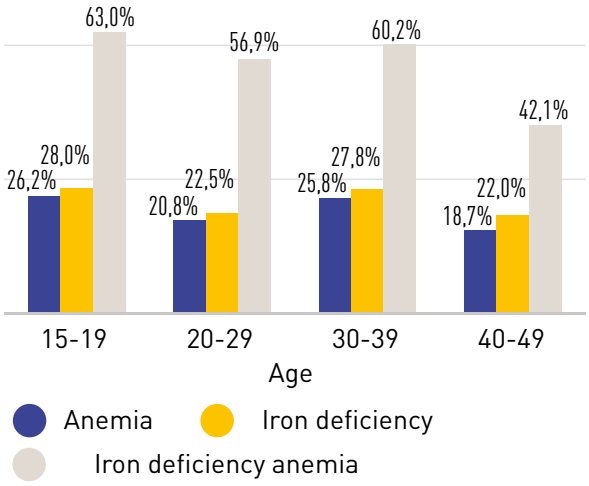
Prevalence of anemia, iron deficiency, and iron deficiency anemia in non-pregnant women 15-49 years by lactating/not lactating



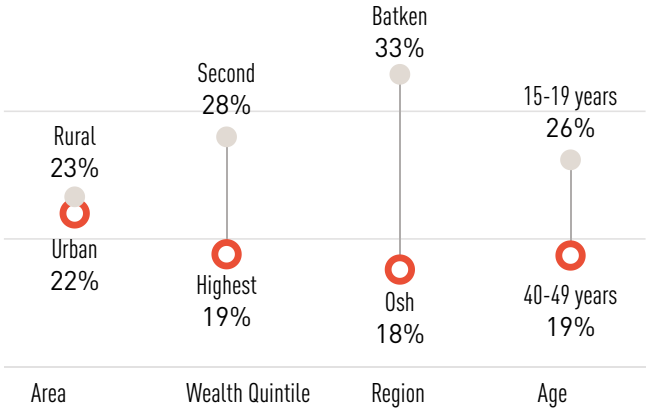
Prevalence of anemia, iron deficiency, and iron deficiency anemia in non-pregnant women 15-49 years by wealth quintile



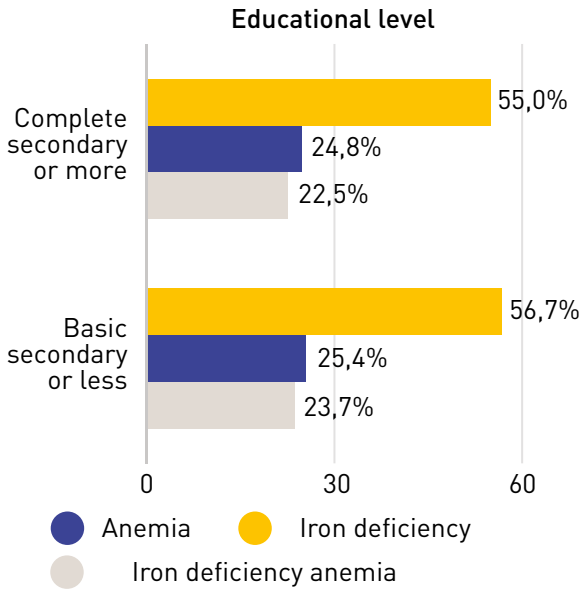
Prevalence of anemia, iron deficiency, and iron deficiency anemia in non-pregnant women 15-49 years by age group



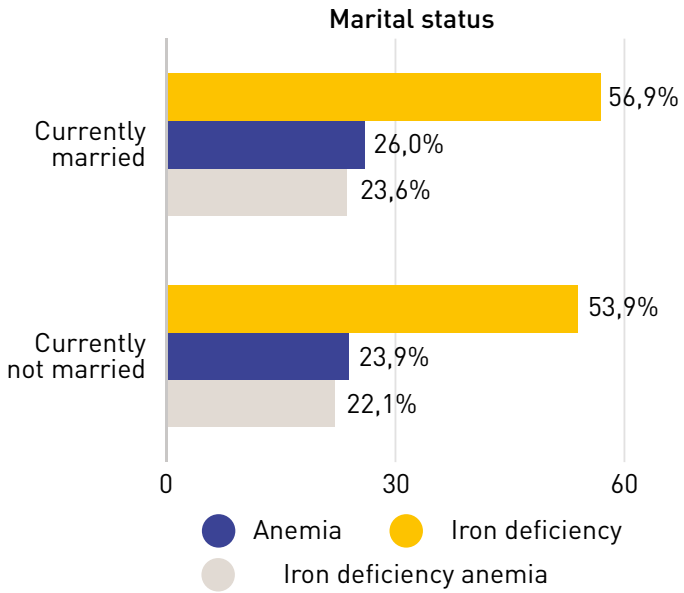
Prevalence of iron deficiency anemia in non-pregnant women 15-49 years by socio-economic demographics



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia by educational level



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia by marital status



Prevalence of Anemia, Iron Deficiency and Iron Deficiency Anemia by region

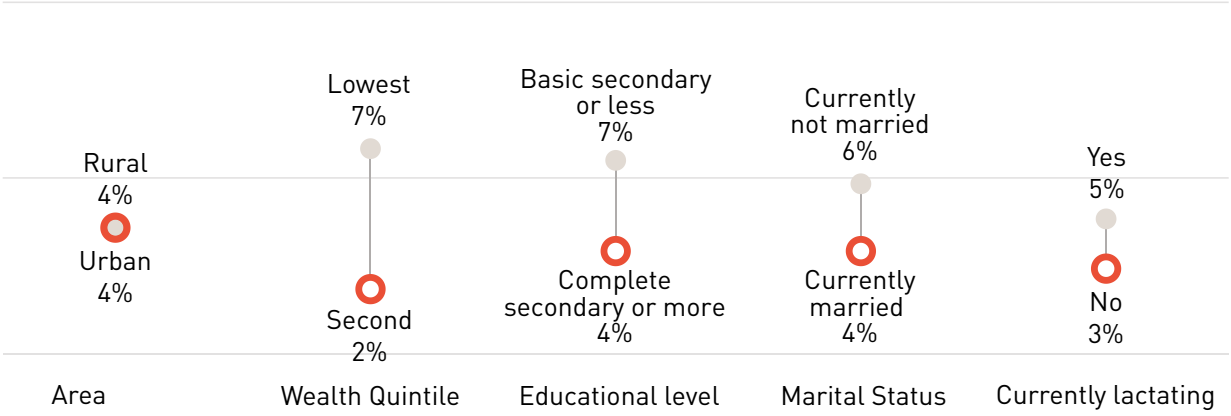
Region	Anemia %	Iron deficiency %	Iron deficiency anemia %
National	**25,3**	**55,9**	**23,1**
Batken	32,8	60,9	32,9
Jalal-Abad	23,1	47,8	18,3
Issyk-Kul	34,8	56,9	27,6
Naryn	32,5	57,7	27
Osh	17,4	47,2	17,6
Talas	32,1	62,9	28,1
Chui	23,8	61	23,6
Bishkek c.	26,1	62,7	25
Osh c.	26,7	55,7	21,8

Key Messages

- About 25% of non-pregnant women are anemic
- More than half of non-pregnant women have iron deficiency
- There is a large overlap between anemia and iron deficiency
- The prevalence of iron deficiency significantly differs by age
- Women living in the poorest households have the highest prevalence of iron deficiency

Vitamin A Deficiency, Non-Pregnant Women 15-49 years

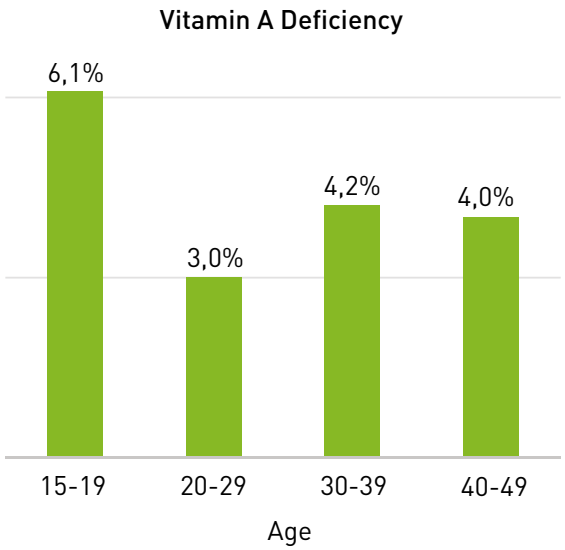
Prevalence of vitamin A deficiency in non-pregnant women 15-49 years of age, by demographic characteristics



Prevalence of vitamin A deficiency in non-pregnant women 15-49 years by region

Region	N	% with Vitamin A Deficiency
National	**1149**	**4,3**
Batken	132	7,9
Jalal-Abad	134	3,5
Issyk-Kul	121	7,3
Naryn	145	2,9
Osh	144	2,8
Talas	113	3,1
Chui	91	2,5
Bishkek c.	127	6,1
Osh c.	142	5,6

Prevalence of vitamin A deficiency in non-pregnant women 15-49 years by age group

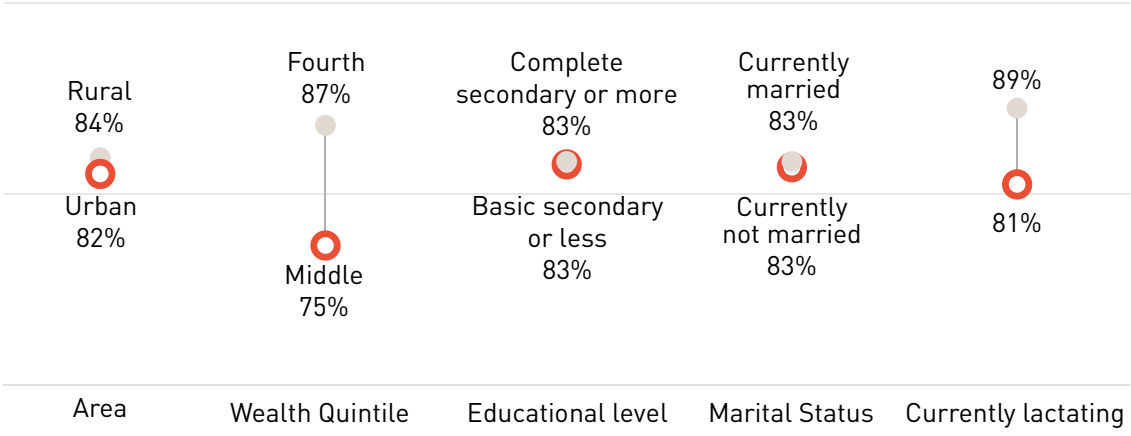


Key Message

Vitamin A deficiency is a mild public health problem among non-pregnant women

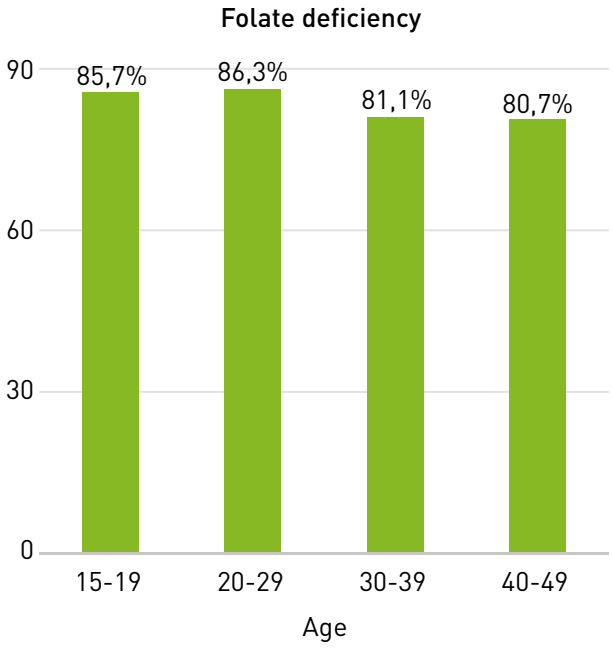
Folate Deficiency, Non-Pregnant Women 15-49 years

Prevalence of folate deficiency in non-pregnant women 15-49 years of age by demographic characteristics



There is a high prevalence of folate deficiency among non-pregnant women of reproductive age in the Kyrgyz Republic. The largest proportion of non-pregnant women with folate deficiency live in the lowest and fourth wealth quintile

Prevalence of folate deficiency in non-pregnant women 15-49 years by age group

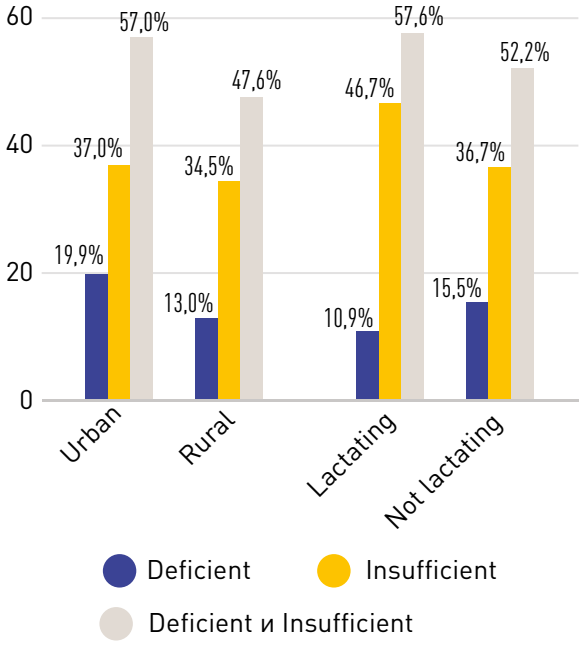


Prevalence of folate deficiency in non-pregnant women 15-49 years by region

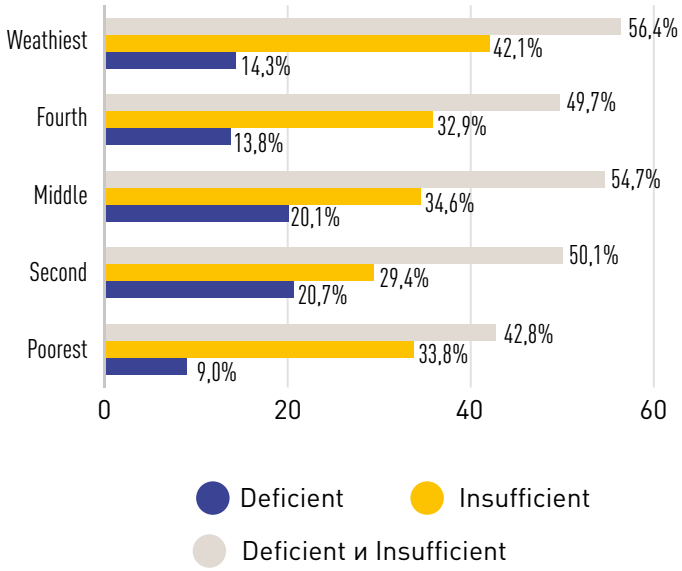
Region	N	% with Vitamin A Deficiency
National	**1163**	**83,2**
Batken	137	82,5
Jalal-Abad	131	75,8
Issyk-Kul	121	90,3
Naryn	144	88,6
Osh	143	82,1
Talas	118	85,1
Chui	92	80,4
Bishkek c.	128	88,9
Osh c.	149	84,7

Vitamin D Deficiency, Non-Pregnant Women 15-49 Years

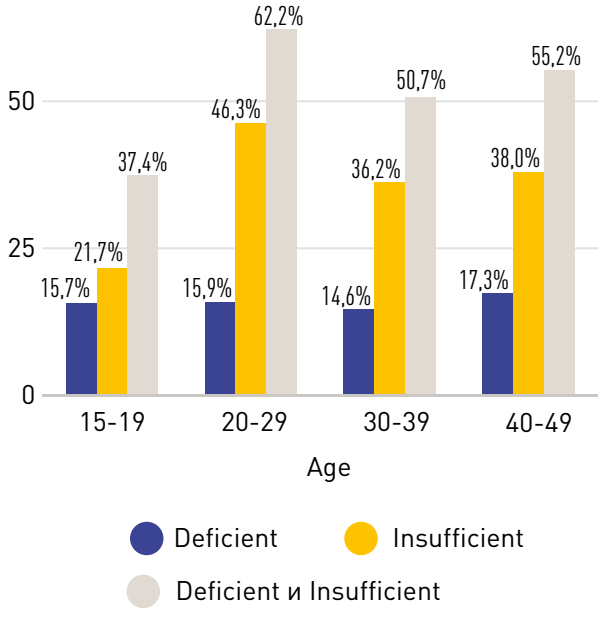
Vitamin D status among non-pregnant women 15-49 years by urban/rural and deficient/insufficient



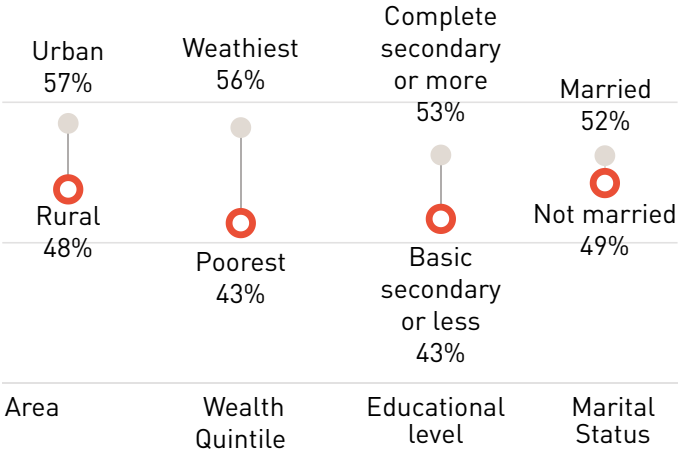
Vitamin D status among non-pregnant women 15-49 years by wealth quintile



Vitamin D status among non-pregnant women 15-49 years by age group

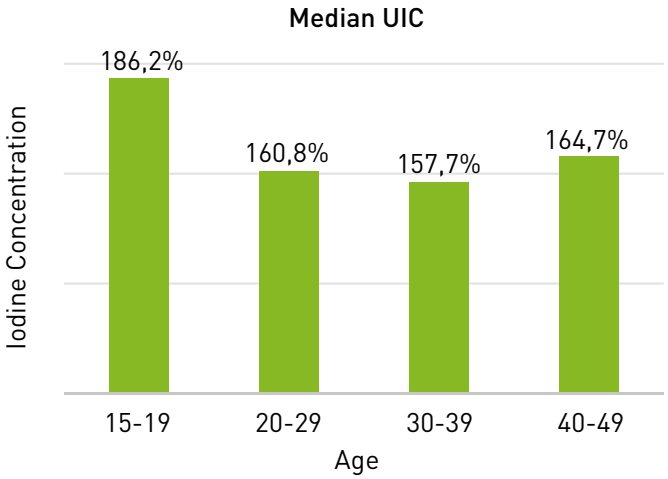


Percentage of non-pregnant women 15-49 years with vitamin D deficiency/insufficiency by socio-economic demographic characteristics



Iodine Status, Non-Pregnant Non-Lactating Women 15-49 years

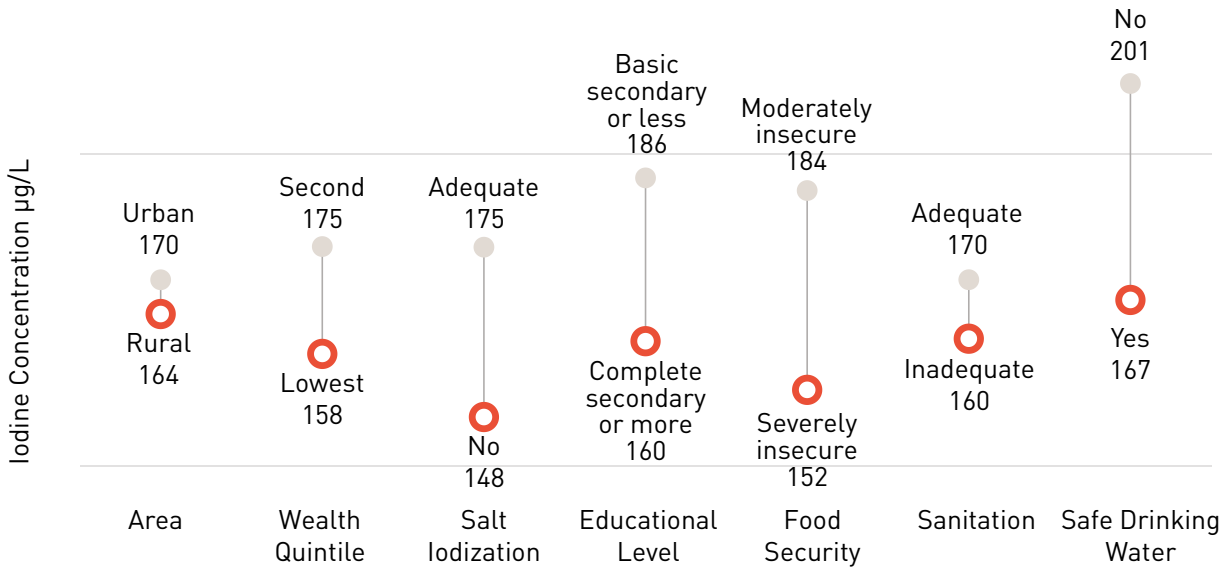
Iodine status among non-pregnant non-lactating women 15-49 years by age group



Key Messages

- Non-pregnant non-lactating women in the Kyrgyz Republic have a sufficient iodine status
- Despite differences by age group, region and education level, all sub-groups indicated an adequate iodine status

Iodine status among non-pregnant non-lactating women 15-49 years by age socio-economic demographic characteristics

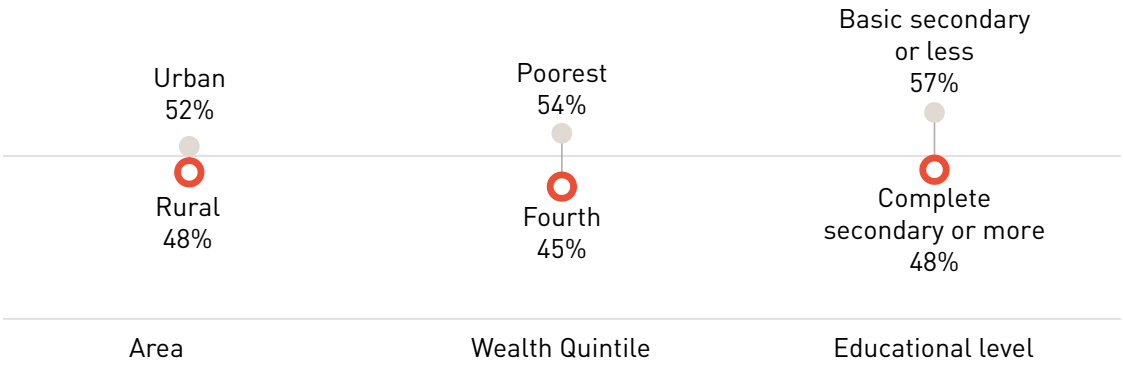


Anemia, Pregnant Women

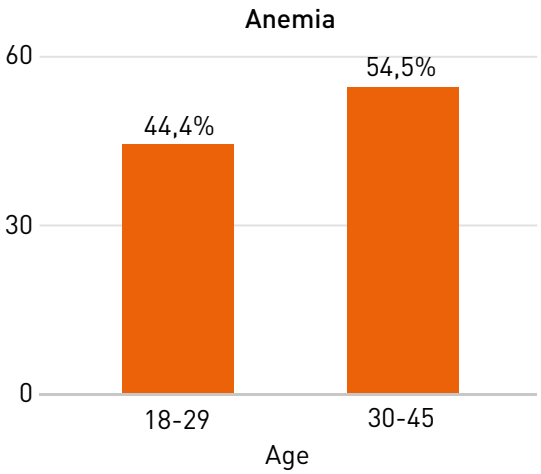
Prevalence of Anemia in Pregnant Women

Anemia defined as Hemoglobin < 110 g/L adjusted for altitude.

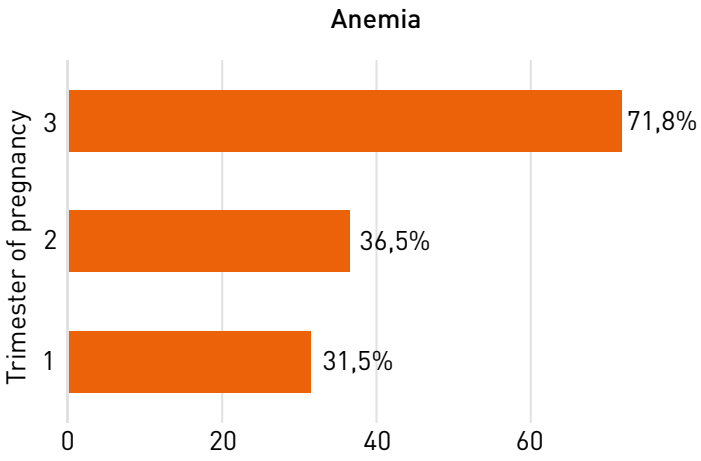
Percentage of pregnant women with anemia disaggregated by socio-economic demographics



Percentage of pregnant women with anemia disaggregated by age group



Percentage of pregnant women with anemia in different trimesters of pregnancy

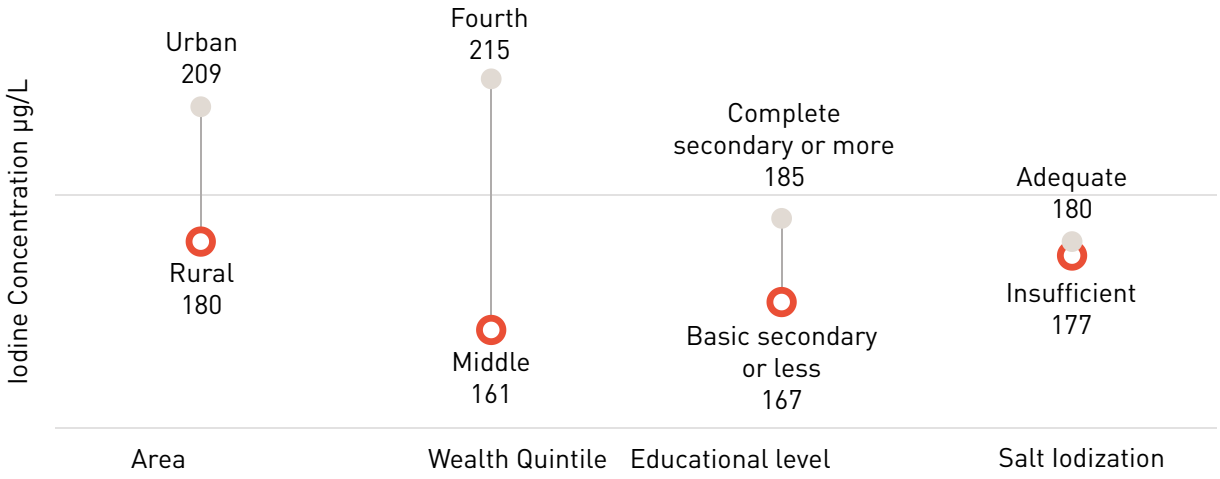


Key Messages

- Approximately half of the pregnant women in the Kyrgyz Republic are anemic
- Anemia in the third trimester is classified as a severe public health problem and affects more than 70% of women

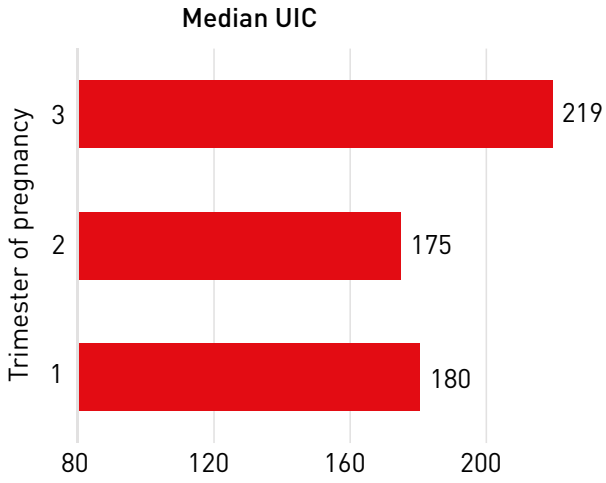
Iodine Status, Pregnant Women

Median Urinary Iodine Concentration in Pregnant Women by demographic characteristics



A median Urinary Iodine Concentrate (mUIC) between 150-249 µg/L is considered adequate for pregnant women

Median Urinary Iodine Concentration by trimester in pregnancy



Median Urinary Iodine Concentration by age group