POSHAN
Led by IFPRI
Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India
Data Note
No. 46 | SEPTEMBER 2021
KARNATAKA

State Nutrition Profile: Karnataka

ABOUT THIS DATA NOTE

This *Data Note* describes the trends for a set of key nutrition and health outcomes, determinants, and coverage of interventions. The findings here are based on data from the National Family Health Survey (NFHS) 3 (2005-2006), 4 (2015-2016), and 5 (2019-2020). In addition to standard prevalence-based analyses, this *Data Note* includes headcount-based analyses aligned to the POSHAN Abhiyaan monitoring framework and uses data from NFHS-5 to provide evidence that helps identify priority districts and number of districts in the state with public health concern as per the WHO guidelines.[1] The *Data Note* includes a color-coded dashboard to compare the coverage of nutrition interventions across all the districts in the state. It concludes with key takeaways for children, women, and men and identifies areas where the state has potential to improve.

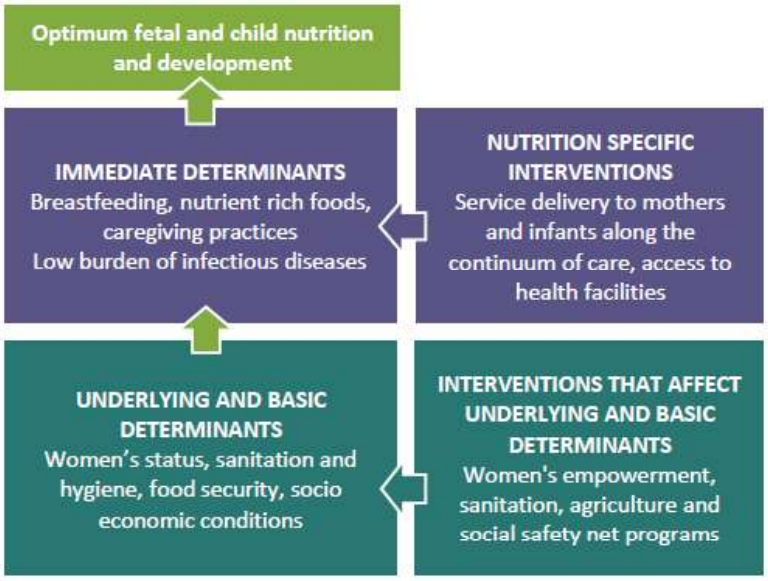
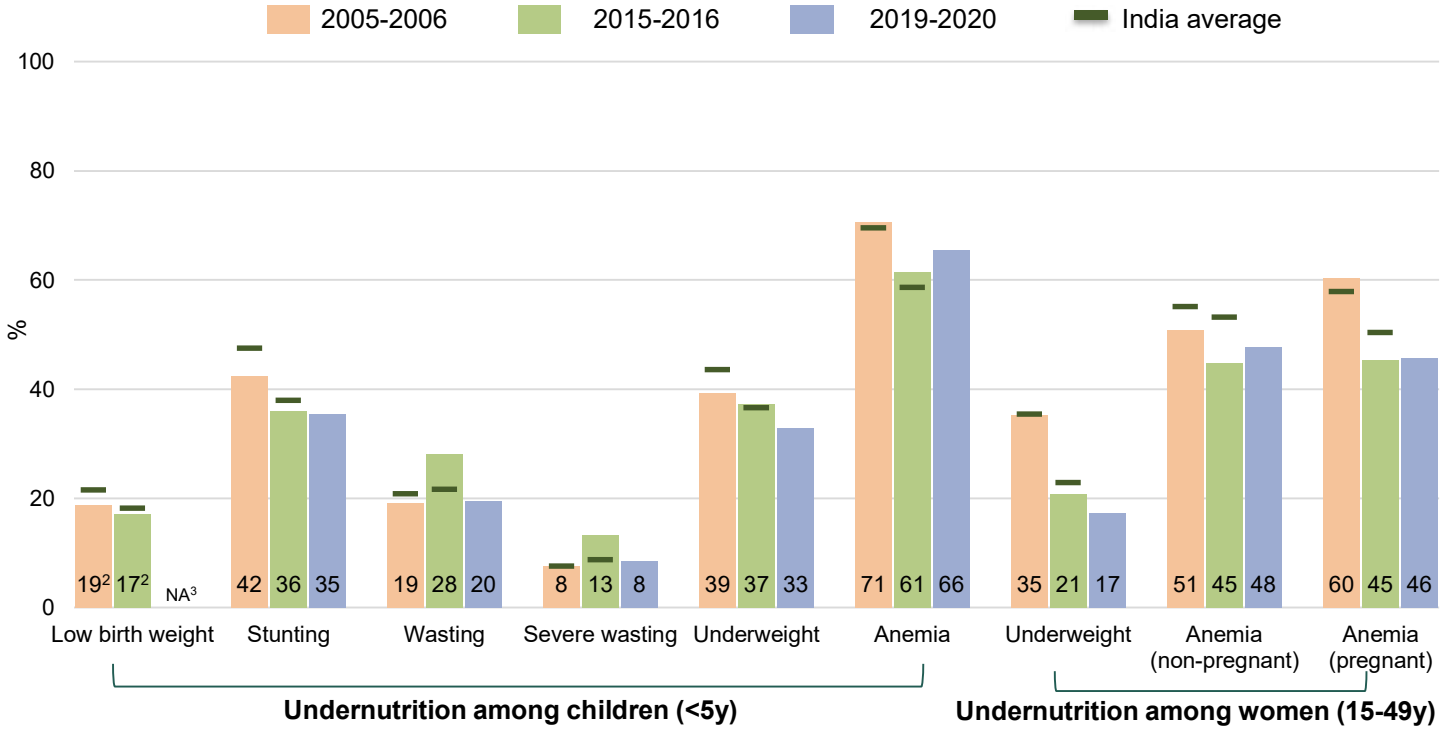


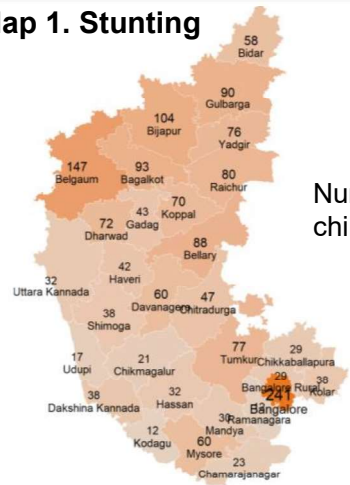
Figure 1. Trends in undernutrition outcomes 2005-2006, 2015-2016, 2019-2020



Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state factsheets (2019-2020).
Note: Adult nutrition outcomes are based on the woman dataset, while child nutrition outcomes are based on all child data.
[1]WHO. Nutrition Landscape Information System (NLiS). Help Topic: Malnutrition in children. Stunting, wasting, overweight and underweight. (https://apps.who.int/nutrition/landscape/help.aspx?menu=0&helpid=391&lang=EN). [2]In NFHS-3, 37.7% of data was missing, while 5.7% of data was missing in NFHS-4. [3]NA refers to the unavailability of data for a particular indicator in the specified NFHS round.

Map 1 & 2. Number of stunted & anemic children <5y, 2019-2020

Map 1. Stunting



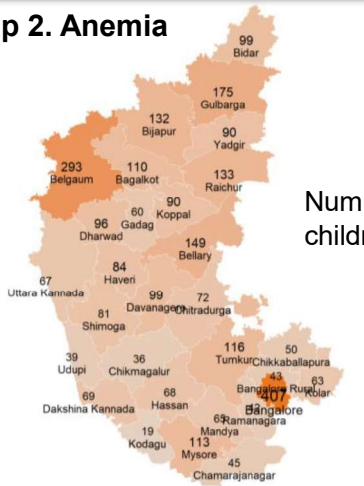
Number of stunted children[2] = 1,799,176

Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	240,522
2	Belgaum	147,004
3	Bijapur	103,806
4	Bagalkot	92,909
5	Gulbarga	89,617

No. of districts with public health concern[1]: 29 of 30

Map 2. Anemia



Number of anemic children[2] = 3,004,538

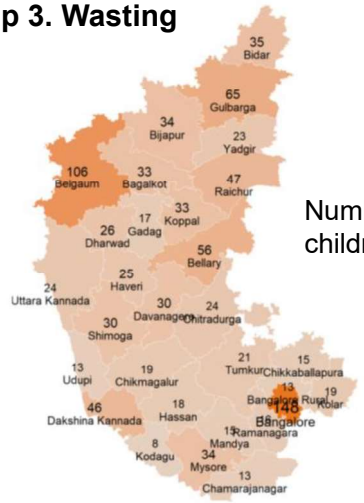
Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	406,583
2	Belgaum	292,693
3	Gulbarga	175,241
4	Bellary	148,540
5	Raichur	132,959

No. of districts with public health concern[1]: 30 of 30

Map 3 & 4. Number of wasted children <5y, 2019-2020

Map 3. Wasting



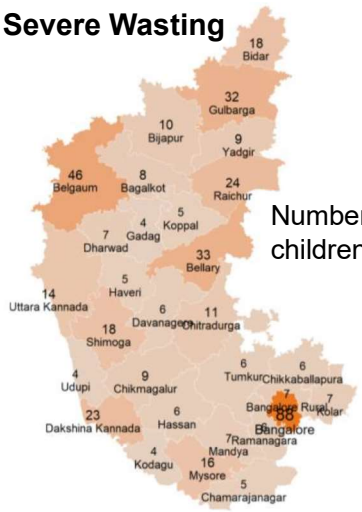
Number of wasted children[2] = 1,003,306

Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	147,541
2	Belgaum	105,771
3	Gulbarga	64,940
4	Bellary	56,099
5	Raichur	46,655

No. of districts with public health concern[1]: 30 of 30

Map 4. Severe Wasting



Number of severely wasted children[2] = 444,351

Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	87,602
2	Belgaum	45,715
3	Bellary	33,316
4	Gulbarga	31,691
5	Raichur	23,529

No. of districts with public health concern[1]: 30 of 30

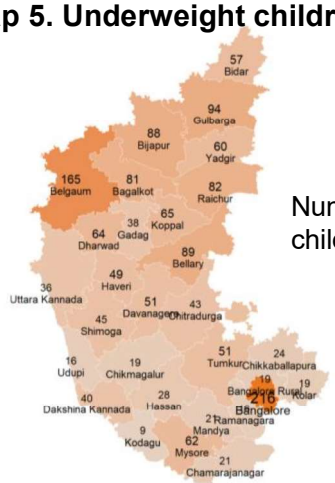
Source: IFPRI estimates - The headcount was calculated as the product of the undernutrition prevalence and the total eligible projected population for each district in 2019. Prevalence estimates were obtained from NFHS-5 (2019-2020; all child data) and projected population for 2019 was estimated using Census 2011.

[1]Public health concern is defined as ≥20% for stunting, ≥40% for anemia, ≥10% for wasting, and ≥2% for severe wasting (WHO 2011).

[2] The number of children <5 years is 5,132,244.

Map 5 & 6. Number of underweight children (<5y) & women (15-49y), 2019-2020

Map 5. Underweight children



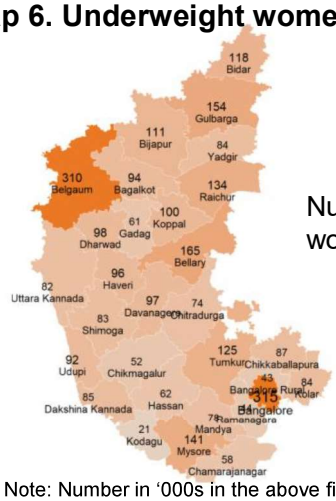
Number of underweight children[3] = 1,667,140

Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	215,932
2	Belgaum	165,379
3	Gulbarga	94,033
4	Bellary	89,415
5	Bijapur	88,201

No. of districts with public health concern[1]: 28 of 30

Map 6. Underweight women



Number of underweight women[3] = 3,148,209

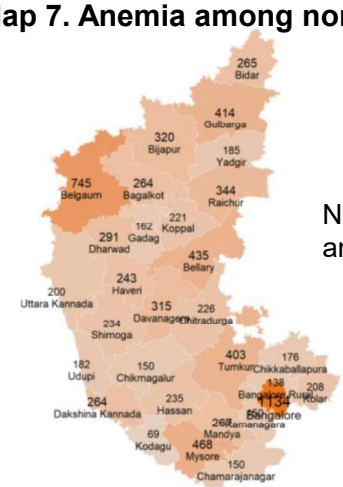
Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	314,887
2	Belgaum	309,882
3	Bellary	164,512
4	Gulbarga	153,741
5	Mysore	141,254

No. of districts with public health concern[1]: 30 of 30

Map 7 & 8. Number of anemic women (15-49y), 2019-2020

Map 7. Anemia among non-pregnant women



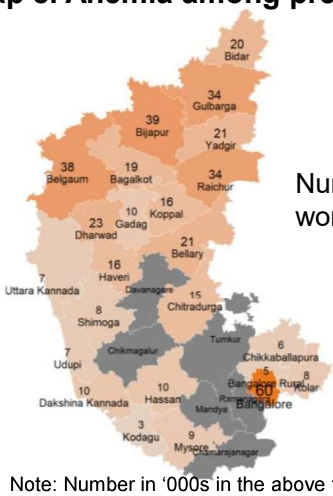
Number of non-pregnant anemic women[3] = 8,856,586

Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	1,133,592
2	Belgaum	745,391
3	Mysore	467,965
4	Bellary	434,995
5	Gulbarga	413,917

No. of districts with public health concern[1]: 28 of 30

Map 8. Anemia among pregnant women[2]



Number of pregnant anemic women[3] = 439,219

Note: Number in '000s in the above figure

	Highest burden districts	
1	Bangalore	60,074
2	Bijapur	38,564
3	Belgaum	37,618
4	Gulbarga	34,398
5	Raichur	33,563

No. of districts with public health concern[1]: 8 of 24

Source: IFPRI estimates - The headcount was calculated as the product of the undernutrition prevalence and the total eligible projected population for each district in 2019. Prevalence estimates were obtained from NFHS-5 (2019-2020; all child/woman data) and projected population for 2019 was estimated using Census 2011. [1]Public health concern is defined as ≥20% for underweight (children), ≥10% for underweight (women), ≥40% for anemia among non-pregnant women, and ≥40% for anemia among pregnant women (WHO 2011). [2]Data are not available for 6 districts. Gray area in Map 8 indicates districts for which data are not available. [3]The total number of children <5 years is 5,132,244, pregnant women 15-49 years is 1,133,932 , and non-pregnant women 15-49 years is 17,655,630.

Figure 2. Trends in overweight/obesity & NCDs[1] 2005-2006, 2015-2016, 2019-2020

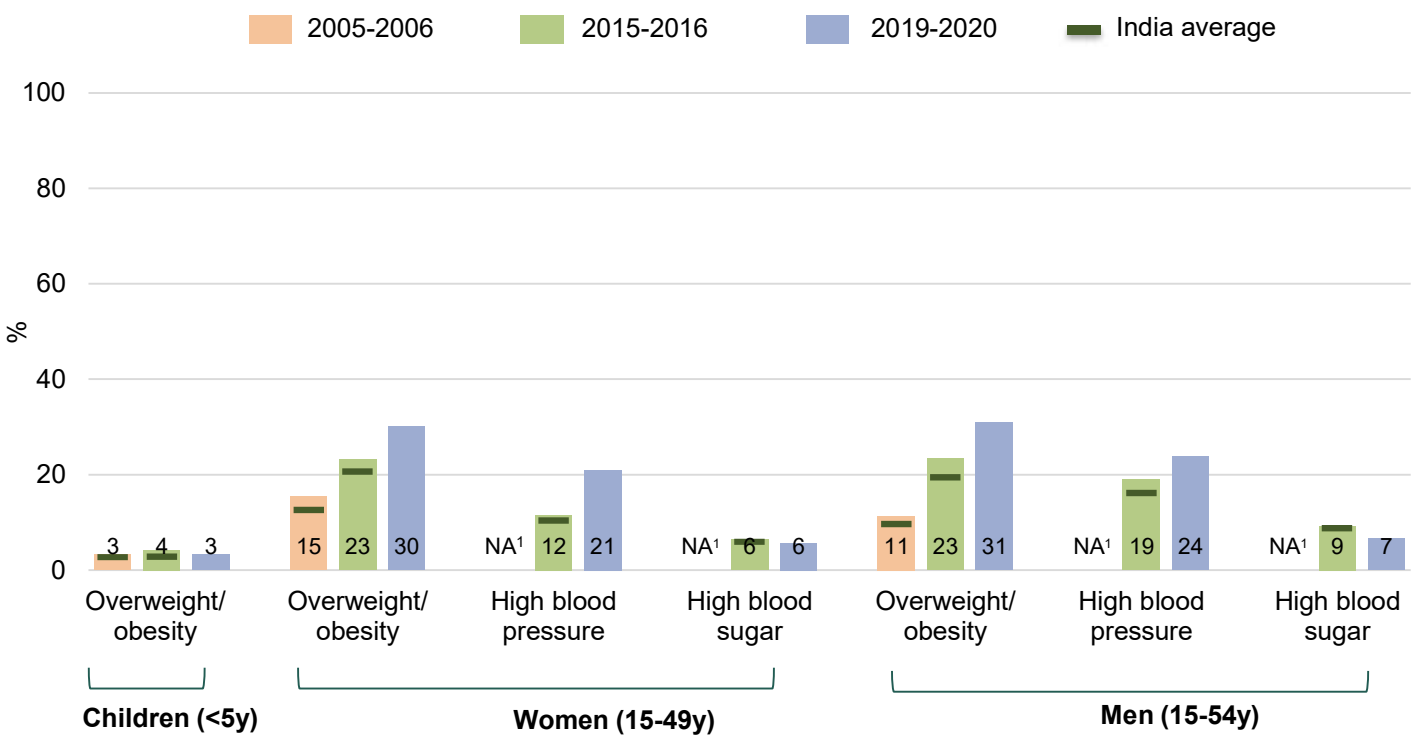


Table 1. Overweight/obesity & NCDs[1] at district-level 2015-2016, 2019-2020

Category	Outcomes	Worst performing districts (pp)[6]	Best performing districts (pp)[6]	Highest burden districts (thousands)[2]	No of districts with public health concern[3] (total=30)
		Difference between (2019-2020) & (2015-2016)	*Difference between (2019-2020) & (2015-2016)*	*2019-2020*	*2019-2020*
Children <5 years	Overweight/ obesity	Dakshina: +6.3 Shimoga: +6.0	Koppal: -7.7 Yadgir: -6.7	Bangalore: 33 Belgaum: 13	0
Women (15-49 years)	Overweight/ obesity	Chitradurga: +24.3 Gadag: +19.0	Dakshina: -3.8	Bangalore: 1262 Mysore: 349	29
	High blood pressure	Bangalore: +16.2 Chitradurga: +15.8	Not applicable[5]	Bangalore:843 Belgaum: 222	18
	High blood sugar	Gulbarga: +2.4 Bagalkot: +1.3	Yadgir: -3.5 Dharwad: -3.2	Bangalore: 265 Belgaum: 67	0
Men (15-54 years)	Overweight /obesity	*Data not available at district level*			
	High blood pressure	Chitradurga: +15.5 Kolar: +15.1	Raichur: -10.0 Bijapur: -8.7	Bangalore: 1042 Belgaum: 292	24
	High blood sugar	Shimoga: +2.8 Hassan: +1.5	U. Kannada[4]: -8.7 Davanagere: -7.3	Bangalore: 370 Belgaum: 76	0

Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state and district factsheets (2019-2020). pp: percentage points.
Note: Adult nutrition outcomes are based on the woman/man dataset, while child nutrition outcomes are based on all child data.
[1]NCDs: non-communicable diseases.
[2]Burden: The headcount was calculated as the product of the overweight/obesity and NCDs prevalence and the total eligible projected population for each district in 2019. Prevalence estimates were obtained from NFHS-5 (2019-2020) and projected population for 2019 was estimated using Census 2011.
[3]Public health concern is defined as prevalence ≥15% for overweight/obesity (children), ≥20% for overweight/obesity (women and men), ≥ 20% high blood pressure (women and men), and ≥20% high sugar (women and men) (WHO 2011). [4]District codes: U. Kannada: Uttara Kannada. [5]Prevalence did not decrease in any of the districts. [5]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts in Karnataka are comparable across both periods.

Figure 3. Trends in immediate determinants (%) 2005-2006, 2015-2016, 2019-2020

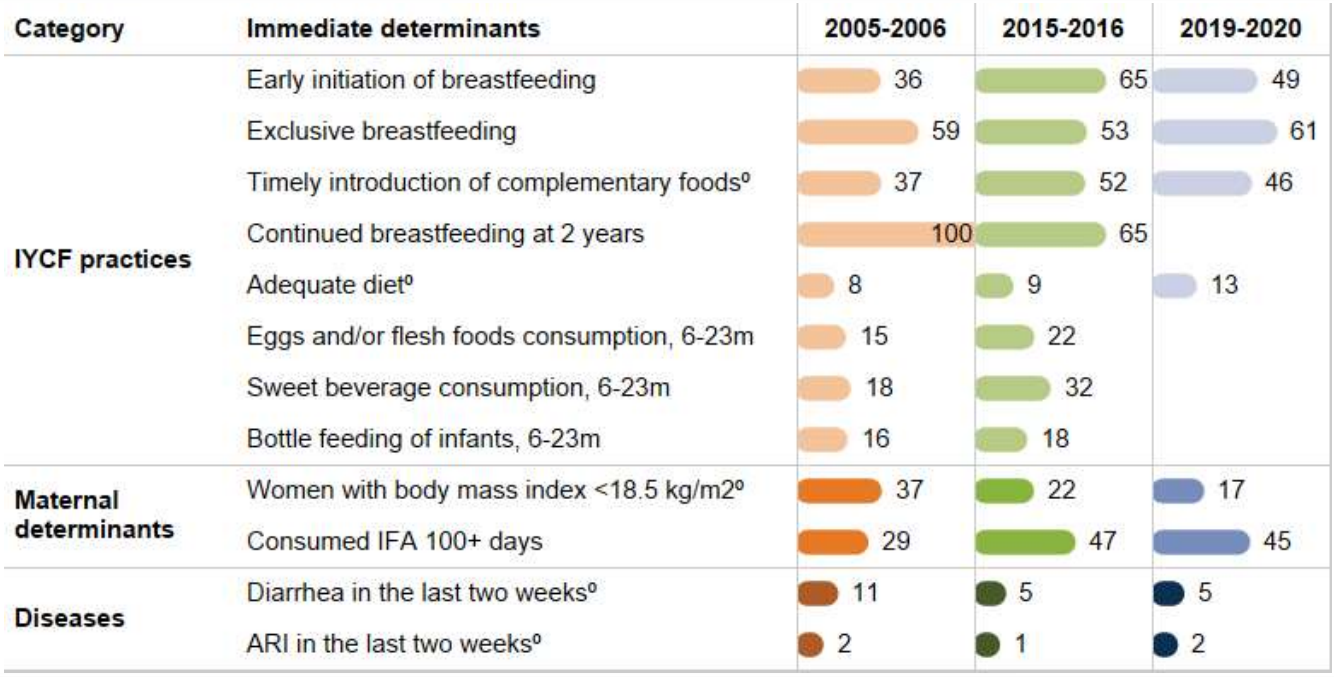


Table 2. Immediate determinants at district-level 2015-2016, 2019-2020

Category	Immediate determinants	Worst performing districts (pp) [3]	Best performing districts (pp) [3]	Top coverage districts (%)[1]
		Difference between (2019-2020) & (2015-2016)	*Difference between (2019-2020) & (2015-2016)*	*2019-2020*
IYCF practices	Early initiation of breastfeeding	Bidar: -43.6 Chamarajanagar: -41.5	Dharwad: +10.1 D. Kannada[2]: +7.5	Dharwad: 70.3 Mandya: 63.7
	Exclusive breastfeeding	Bagalkot: -20.3 Shimoga: -12.9	Haveri: +29.0 Koppal: +19.4	Davanagere: 80.8 Haveri: 80.0
	Timely introduction of complementary foods ⁰	*Data not available at district level*		
	Adequate diet⁰	Bangalore: -13.3 D. Kannada[2]: -11.1	Hassan: +20.8 Kolar: +13.3	Hassan: 29.1 Chitradurga: 27.2
Maternal determinants	Women with BMI<18.5 kg/m2⁰	Chikkaballapura: +2.4 Gadag: +2.0	Chikmagalur: -13.1 U. Kannada[2]: -12.6	Bangalore: 10.0 Hassan: 11.1
	Consumed IFA 100+ days	Davanagere: -41.6 Belgaum: -25.1	Mandya: +35.0 D.Kannada[2]: +27.1	Dakshina: 68.9 Bangalore: 67.0
Diseases	Diarrhea in the last two weeks⁰	Gulbarga: +8.1 Bidar: +5.5	Hassan: -7.0 Mysore: -6.5	Dharwad: 1.9 Bangalore: 2.2
	ARI in the last two weeks⁰	Chamarajanagar: +3.6 Shimoga: +3.3	Gadag: -4.5 Udupi: -3.9	Dharwad: 0.0 Bangalore: 0.0

Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state and district factsheets (2019-2020). pp: percentage points.
Note:Immediate determinants are based on the last child data; data on continued breastfeeding at 2 years, egg and/or flesh foods consumption, sweet beverage consumption, and bottle feeding of infants not available in NFHS-5 factsheets (2019-20)/state report
⁰Indicator definition differs slightly between NFHS-4 and NFHS-5. [1]For all indicators, top coverage districts refer to the districts with the highest prevalence in immediate determinants, except for women with a BMI of 18.5 kg/m2, diarrhea in the last two weeks, and ARI in the last two weeks, for which it refers to the districts with the lowest prevalence in coverage. [2]District codes: D. Kannada: Dakshina Kannada; U. Kannada: Uttara Kannada. [3]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts in Karnataka are comparable across both periods.

Figure 4. Trends in underlying determinants (%) 2005-2006, 2015-2016, 2019-2020

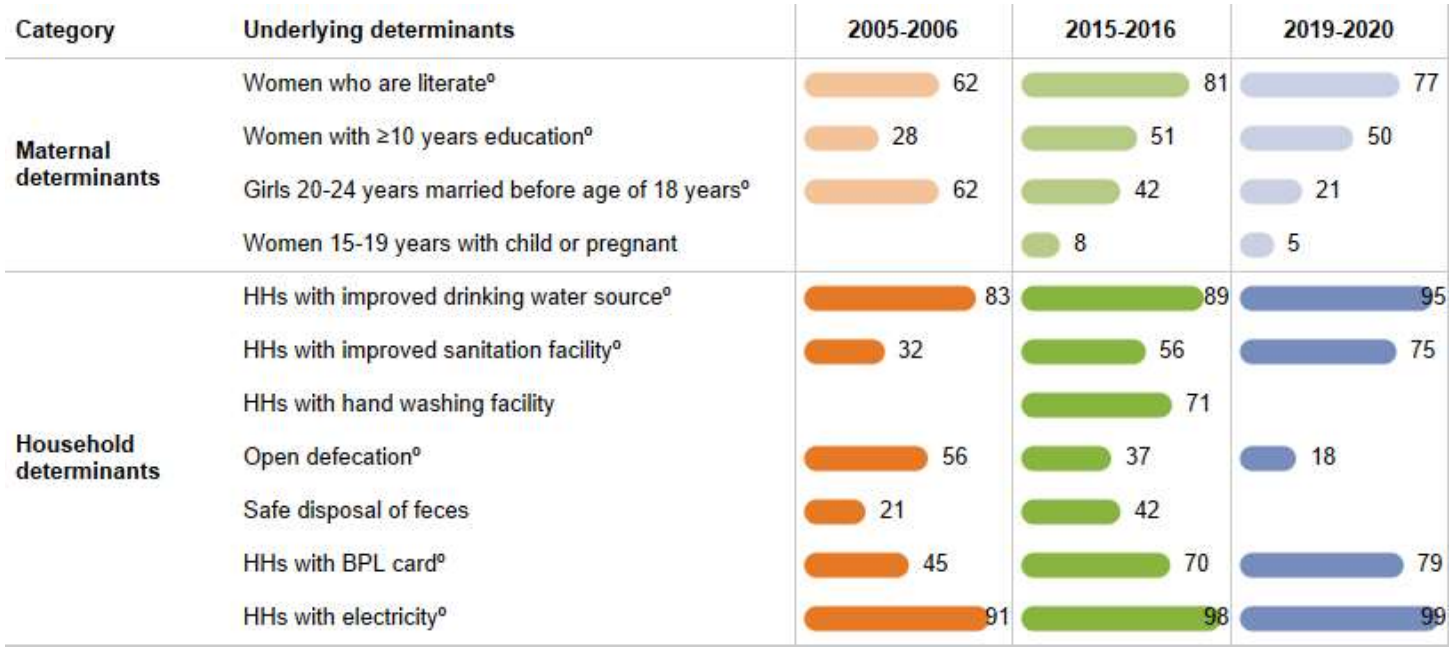
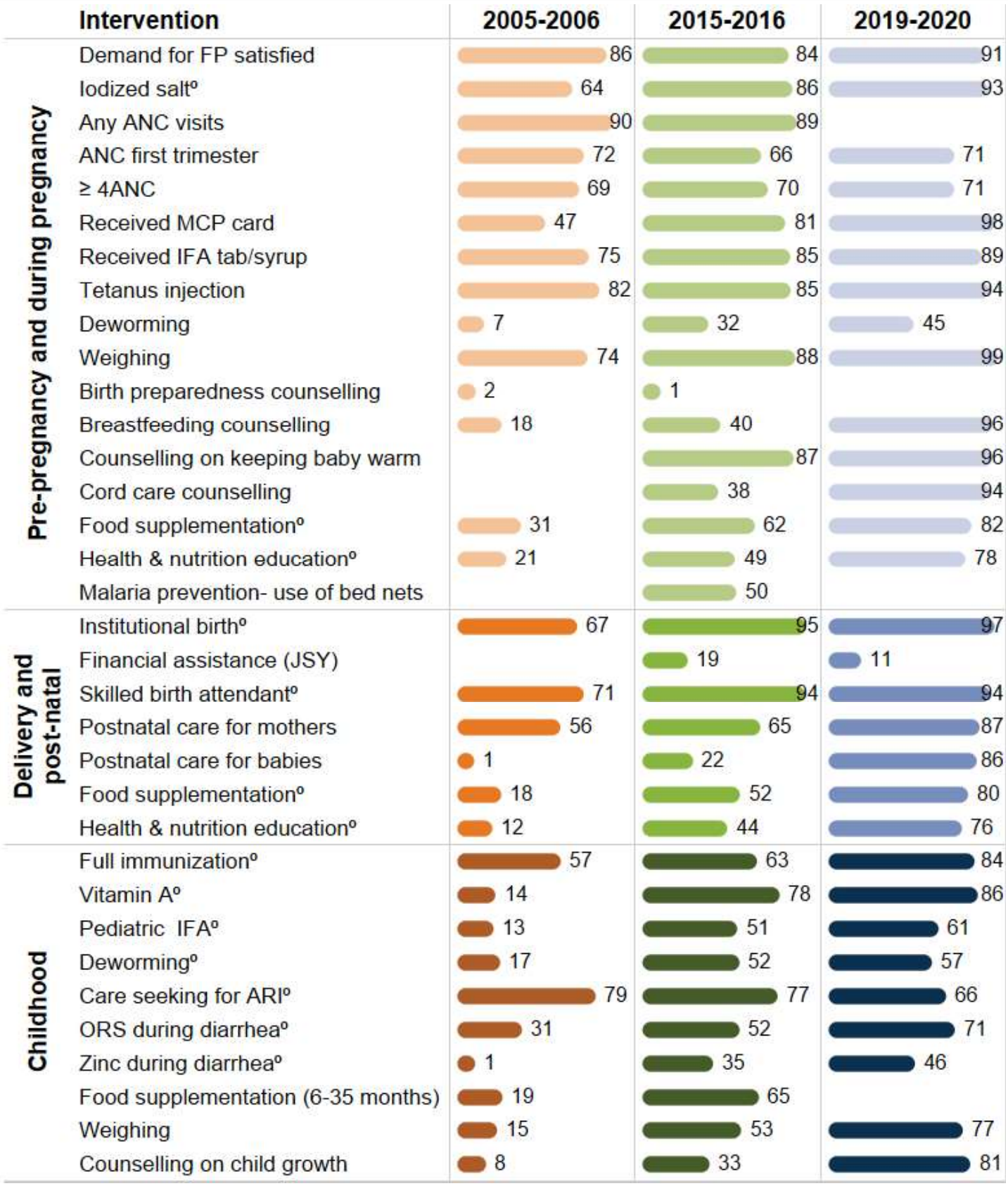


Table 3. Underlying determinants at district-level 2015-2016, 2019-2020

Category	Underlying determinants	Worst performing districts (pp) [4]	Best performing districts (pp) [4]	Top coverage districts (%)[1]
		Difference between (2019-2020) & (2015-2016)	*Difference between (2019-2020) & (2015-2016)*	*2019-2020*
Maternal determinants	Women who are literate⁰	Mandya: -14.4 Shimoga: -13.6	Gulbarga: +13.5 Raichur: +12.9	D. Kannada[3]: 92.7 Udupi: 90.3
	Women with ≥10 years education⁰	Mandya: -19.4 Mysore: -16.3	Bellary: +12.1 Gulbarga: +10.7	Bangalore: 70.1 D. Kannada[3]: 62.8
	Girls 20-24 years married before age of 18 years⁰	Not applicable[2]	Chamarajanagar: -37.6 Koppal: -35.0	Udupi: 4.4 D. Kannada[3]: 4.9
	Women 15-19 years with child or pregnant	Raichur: +5.9 Kolar: +2.2	Bellary: -10.1 Mysore: -10.0	Udupi: 0.7 D. Kannada[3]: 1.0
Household determinants	HHs with improved drinking water source⁰	Dharwad: -8.3 Gulbarga: -4.1	Kolar: +33.1 Tumkur: +21.9	Chamarajanagar: 99.9 Bagalkot: 99.2
	HHs with improved sanitation facility⁰	Not applicable[2]	Tumkur: +37.0 Chikkaballapura: +33.4	D. Kannada[3]: 97.1 Udupi: 94.5
	HHs with electricity⁰	Bangalore: -1.2 Mandya: -1.0	Shimoga: +5.2 Haveri: +4.1	Chikkaballapura: 99.9 D. Kannada[3]: 99.8

Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state and district factsheets and state reports (2019-2020).
Note: Underlying determinants are based on the last child data; safe disposal of feces not available in NFHS-5 factsheets (2019-20)/state report and data on HHs with hand washing facility not available in NFHS-3 (2005-06) and NFHS-5 factsheets (2019-20)/state report. Data on open defecation and HHs with BPL card for 2019-2020 are taken from NFHS-5 state reports. [0]Indicator definition differs slightly between NFHS-4 and NFHS-5. [1]For all indicators, top coverage districts refer to the districts with the highest prevalence in underlying determinants, except for girls 20-24 years married before age of 18 years and women 15-19 years with child or pregnant for which it refers to the districts with the lowest prevalence in coverage. [2]Prevalence did not increase or decrease in any of the districts. [3]District codes: D. Kannada: Dakshina Kannada [4]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts in Karnataka are comparable across both periods.

Figure 5. Trends in coverage of interventions across the first 1,000 days (%), 2005-2006, 2015-2016, 2019-2020



Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016) & NFHS-5 state factsheets and state reports (2019-2020).
[0]Indicator comparable between NFHS-3 and NFHS-4 but differs slightly from NFHS-5.
Note 1 : Interventions' coverage is based on the last child data.
Note 2: The following information is not available in the NFHS-5 factsheets and state reports (2019-20): receipt of at least one ANC visit, birth preparedness counselling, malaria prevention and food supplementation (6-35m). Information on use of bed nets during pregnancy is not available in NFHS-3 data (2006).
Note 3: Data on food supplementation and health and nutrition education during pregnancy and post-natal care, and weight measurement during childhood and counselling on child growth for 2019-2020 are taken from NFHS-5 state reports.
Note 4: Refer to district dashboard for the inter-district variability in the coverage of interventions.

Intervention coverage at district-level, 2019-2020

<20%	20-<40%	40-<60%	60-<80%	>=80%	Not Available

District name	Pre-pregnancy		Pregnancy														Delivery & postnatal							Early childhood									
	Demand for FP satisfied	Iodized salt	Any ANC visits	ANC first trimester	≥4 ANC	Received MCP card	Received IFA tab/syrup	Tetanus injection	Deworming	Weighing	Birth preparedness counselling	Breastfeeding counselling	Counselling on keeping baby warm	Cord care counselling	Food supplementation	Health & nutrition education	Malaria prevention-use of bed nets	Institutional birth	Financial assistance (JSY)	Skilled birth attendant	Postnatal care for mothers	Postnatal care for babies	Food supplementation	Health & nutrition education	Full immunization	Vitamin A	Paediatric IFA	Deworming	Care seeking for ARI	ORS during diarrhea	Zinc during diarrhea	Food supplementation (6-35 months)	Weighing	Counselling on child growth
KARNATAKA		92.8		71.0	70.9	97.6	88.7	93.6	44.6									97.0	10.6	93.8	87.4	85.5			84.1	86.2			65.7	71.3	45.5			
Bagalkot		81.3		78.2	76.2	98.7	83.5	94.2	28.0									95.2	16.7	91.4	89.0	86.7			78.6	73.0			79.1					
Bangalore		99.4		75.3	74.6	98.0	98.1	98.4	56.4									99.3	2.4	94.4	88.0	88.2			78.2	86.9								
Bangalore Rural		95.6		81.8	90.9	98.4	91.6	100.0	52.9									100.0	16.6	97.9	91.7	91.0			92.7	84.9								
Belgaum		95.2		71.2	63.7	96.1	84.2	94.4	47.4									97.5	8.2	96.4	87.0	85.6			81.4	91.9			66.6					
Bellary		84.7		67.5	56.4	98.1	77.7	90.5	42.4									95.7	12.9	96.0	86.6	84.2			71.5	73.7			67.0					
Bidar		97.7		62.7	55.3	96.8	85.2	97.4	38.1									99.0	8.1	91.7	89.6	86.5			74.8	80.5			56.9	83.4	56.8			
Bijapur		92.3		60.3	56.4	91.1	87.9	93.5	23.1									91.8	3.5	90.0	74.4	74.8			71.1	83.4			68.7	54.8	43.5			
Chamarajanagar		98.0		83.2	84.1	100.0	84.7	96.6	56.0									100.0	20.9	96.7	94.2	93.2			93.3	93.6			84.7					
Chikkaballapura		95.0		82.6	90.5	98.2	84.5	94.7	56.6									99.0	15.4	97.5	91.2	90.5			76.6	84.8								
Chikmagalur		96.8		69.5	74.3	99.1	92.6	93.1	43.5									98.4	16.4	98.7	90.9	91.4			91.0	85.5			80.2					
Chitradurga		96.4		66.3	79.3	99.1	91.6	93.9	60.2									98.3	14.9	95.1	95.2	94.3			94.6	93.5			67.2					
Dakshina Kannada		96.9		86.1	82.0	98.3	92.0	97.5	37.8									100.0	4.2	91.9	83.5	83.5			86.8	88.7								
Davanagere		94.9		63.0	63.1	96.3	90.0	86.4	31.9									98.3	20.0	88.1	78.9	74.0			79.4	78.7			44.6	54.5	11.1			
Dharwad		92.3		78.7	85.2	96.9	86.6	92.1	34.6									99.7	11.7	99.0	98.0	95.5			87.6	83.5			82.1					
Gadag		77.1		52.6	68.7	97.0	85.9	93.3	40.1									96.2	15.2	98.2	84.7	83.4			74.3	72.0			71.2	79.8	36.9			
Gulbarga		92.2		59.3	53.6	95.1	82.3	90.8	32.7									88.7	6.1	87.1	79.6	78.1			75.3	94.5			49.9	68.9	53.4			
Hassan		98.5		67.6	75.8	97.8	91.2	98.6	67.2									100.0	12.3	97.1	92.6	86.1			96.8	91.7								
Haveri		87.9		73.3	58.7	98.8	88.1	88.0	50.1									97.2	22.9	95.8	92.4	85.4			95.7	78.4			68.0	53.8	28.0			
Kodagu		98.5		70.6	74.4	97.8	92.6	95.5	50.8									98.4	13.4	94.1	93.3	91.9			90.6	90.7								
Kolar		94.7		78.0	90.9	99.1	89.7	97.1	50.6									99.6	13.4	99.3	95.7	95.0			86.3	87.5								
Koppal		47.9		52.4	50.7	100.0	82.3	84.5	22.6									90.7	11.6	89.2	80.7	79.5			84.8	70.9			58.4	55.9	22.9			
Mandya		97.7		85.6	90.1	100.0	93.9	99.3	42.2									99.5	8.5	97.3	95.5	95.1			93.9	94.9								
Mysore		98.0		82.0	85.7	98.4	96.2	94.6	49.5									100.0	10.6	97.8	93.5	88.6			97.2	98.1								
Raichur		73.3		66.4	67.5	97.1	79.7	89.0	42.9									88.9	16.1	83.3	76.1	73.3			80.2	83.0			57.0					
Ramanagara		95.7		91.8	88.7	100.0	88.4	94.7	49.7									100.0	14.0	100.0	87.0	84.8			100.0	87.6								
Shimoga		91.0		58.7	79.4	98.5	91.5	96.9	48.3									99.7	17.6	96.5	91.5	89.7			96.1	92.2			77.3					
Tumkur		94.7		68.6	80.4	99.3	92.7	92.7	55.0									100.0	6.8	93.1	95.2	90.2			97.7	96.8								
Udupi		95.6		75.1	59.4	99.2	96.2	94.8	36.8									98.9	4.5	90.2	89.2	87.7			89.9	88.1			49.4					
Uttara Kannada		94.3		80.4	57.9	97.9	87.8	92.2	52.5									99.3	14.1	99.2	87.4	87.8			93.6	89.7			62.0					
Yadgir		76.3		57.4	63.6	97.9	79.1	79.4	27.7									93.3	13.5	93.0	73.3	72.2			82.6	77.7			80.8					

Source: NFHS-5 district factsheets and state reports (2019-20).

Note 1: The following information is not available in the NFHS-5 factsheets and state reports (2019-20): (1) Information on preconception and pregnancy-related indicators including demand for FP satisfied, receipt of at least one ANC visit, weighing, birth preparedness and breastfeeding counselling, counselling on keeping baby warm, cord care counselling, food supplementation, health and nutrition education and malaria prevention; (2) Lactation-related indicators including, food supplementation and health and nutrition education; and (3) early childhood-related indicators including pediatric IFA, deworming, food supplementation (6-35m), weighing and counselling on child growth. Information on use of bed nets during pregnancy not available in NFHS-3 data (2005-2006).
Note 2: Food supplementation during early childhood is for children aged 6-35 months; counselling on child growth during early childhood is conducted after taking weight measurement.

Table 4. Intervention coverage at district-level 2015-2016, 2019-2020

Category	Interventions	Worst performing districts (pp) [3]	Best performing districts (pp) [3]	Top coverage districts (%)
		Difference between (2019-2020) & (2015-2016)	*Difference between (2019-2020) & (2015-2016)*	*2019-2020*
Pregnancy	ANC first trimester	Davanagere: -20.7 Shimoga: -14.0	Bangalore: +23.8 Ramanagara: +22.8	Ramanagara.: 91.8 D. Kannada[2]: 86.1
	≥4 ANC visits	Gulbarga: -31.0 Davanagere: -24.9	Bangalore: +26.1 Mysore: +19.9	Bangalore R[2].: 90.9 Kolar: 90.9
	Received MCP Card	Not applicable[1]	Bangalore: +31.0 Gulbarga: +23.5	Mandya: 100 Ramanagara: 100
	Tetanus injection	Yadgir: -9.5 Davanagere: -4.9	Shimoga: +30.4 Kodagu: +17.7	Bangalore R[2].: 100 Mandya: 99.3
Delivery and post-natal	Institutional birth°	Gulbarga: -3.5 Davanagere: -0.5	Bellary: +9.1 Raichur: +7.7	Bangalore R[2]:100 Hassan: 100
	Skilled birth attendant°	Davanagere: -10.7 Gulbarga: -10.2	Chikmagalur: +15.5 U. Kannada[2]: +12.5	Ramanagara: 100 Kolar: 99.3
	Postnatal care for mothers	Belgaum: -3.3	Bagalkot: +42.3 Bellary: +42.0	Dharwad: 98.0 Kolar: 95.7
	Postnatal care for babies°	Not applicable[1]	Dharwad: +80.5 Chikkaballapura: +79.2	Dharwad: 95.5 Mandya: 95.1
Early childhood	Full immunization	Not applicable[1]	Chikmagalur: +54.6 Mysore: +53.5	Ramanagara: 100 Tumkur: 97.7
	Vitamin A supplementation°	Bagalkot: -16.9 Koppal: -15.8	Tumkur: +29.9 Mysore: +26.1	Mysore: 98.1 Tumkur: 96.8
	Care seeking for ARI°	Udupi: -34.1 Gulbarga: -31.3	Raichur: +32.5 Chamarajanagar:+24.5	Chamarajanagar:84 Dharwad: 82.1
	ORS treatment during diarrhea°	Bijapur: -36.6 Koppal: -34.9	Gulbarga: +3.6	Bidar: 83.4 Gadag: 79.8
	Zinc treatment during diarrhea°	Gadag: -38.7 Bijapur: -30.3	Gulbarga: +53.4	Bidar: 56.8 Gulbarga: 53.4

Key takeaways

Children: Stunting and underweight prevalence declined by 6 percentage points (pp) and 2pp, respectively, between 2006 and 2016; stunting remained stable; underweight declined by 4pp between 2016 and 2020. Wasting increased by 9pp between 2006 and 2016 and declined by 8pp between 2016 and 2020. Anemia prevalence declined by 10pp between 2006 and 2016 but increased by 5pp between 2016 and 2020. Overweight/obesity prevalence remained stable between 2006 and 2020.

Women: Underweight prevalence declined by 14pp between 2016 and 2020 and by 4pp between 2016 and 2020. Anemia among non-pregnant and pregnant women declined by 6pp and 15pp, respectively, between 2006 and 2016. But it increased by 3 pp among non-pregnant women by 2020, while remaining stable among pregnant women. Overweight/obesity prevalence increased by 8pp between 2006 and 2016 and by 7pp between 2016 to 2020.

Men: Overweight/obesity prevalence increased by 12pp between 2006 to 2016 and by 8pp between 2016 and 2020.

Attention is needed to improve (%s in 2020):

- ***Outcomes***: Stunting (35%); anemia in children (66%); anemia in non-pregnant (48%); and pregnant (46%) women
- ***Immediate determinants:*** Adequate diet (13%); consumption of 100+ IFA (45%)
- ***Underlying determinants:*** Women with ≥10 years education (50%)
- ***Coverage of interventions:*** Zinc during diarrhea (46%)

Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state and district factsheets (2019-2020). pp: percentage points. Note: Interventions' coverage are based on the last child data. [0]Indicator definition differs slightly between NFHS-4 and NFHS-5. [1]Prevalence did not increase or decrease in any of the districts. [2]District codes: D. Kannada: Dakshina Kannada; U. Kannada: Uttara Kannada; Bangalore R.: Bangalore Rural. [3]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts in Karnataka are comparable across both periods.

Indicator definition

Nutrition outcomes	Definition
Low birth weight	Percentage of live births in the five years preceding the survey with a reported birth weight less than 2.5 kg, based on either a written record or the mother's recall
Stunting among children	Percentage of children aged 0-59 months who are stunted i.e., height-for-age z score < -2SD
Wasting among children	Percentage of children aged 0-59 months who are wasted i.e., weight-for-height z score < -2SD
Severe wasting among children	Percentage of children aged 0-59 months who are wasted i.e., weight-for-height z score < -3SD
Underweight children	Percentage of children aged 0-59 months who are underweight i.e., weight-for-age z score < -2SD
Anemia among children	Percentage of children aged 6-59 months who are anemic i.e., (Hb <11.0 g/dl)
Underweight women	Percentage of women aged 15-49 whose Body Mass Index (BMI) is below normal (BMI <18.5 kg/m2)
Anemia among non-pregnant women	Percentage of non-pregnant women aged 15-49 who are anemic (<12.0 g/dl)
Anemia among pregnant women	Percentage of pregnant women aged 15-49 who are anemic (<11.0 g/dl)
Overweight/obesity - children	Percentage of children aged 0-59 months who are overweight i.e., weight-for-height z score > 2SD
Overweight/obesity - women	Percentage of men aged 15-54 who are overweight or obese (BMI ≥25.0 kg/m2)
Overweight/obesity - men	Percentage of men aged 15-54 who are overweight or obese (BMI ≥25.0 kg/m2)
High blood pressure among women^	Percentage of women aged 15-49 with elevated blood pressure (Systolic >140 mm Hg or diastolic >90 mm Hg)
High blood pressure among men^	Percentage of men aged 15-54 with elevated blood pressure (Systolic >140 mm Hg or diastolic >90 mm Hg)
High sugar level among women^	Percentage of women aged 15-49 with elevated blood pressure (Systolic >140 mm Hg or diastolic >90 mm Hg)
High sugar level among men^	Percentage of men aged 15-54 with high blood sugar levels (141-160 mg/dl)
Immediate determinants	
Early initiation of breastfeeding	Percentage of children under aged 3 years breastfed within one hour of birth for the last child born in the 3 years before the survey
Exclusive breastfeeding	Percentage of youngest children under age 6 months living with mother who were exclusively breastfed
Timely introduction of complementary foods[0]	[1]Percentage of youngest children aged 6-8 months living with mother who received solid or semi-solid food during the previous day; [2]Percentage of youngest children aged 6-8 months living with mother who received solid or semi-solid food and breastmilk
Continued breastfeeding at 2 years[$]	Percentage of youngest children 12–23 months of age who were fed breast milk during the previous day
Adequate diet	Percentage of youngest children 6–23 months of age who consumed a minimum acceptable diet during the previous day
Eggs and/or flesh foods consumption[$]	Percentage of youngest children 6–23 months of age who consumed egg and/or flesh food during the previous day
Sweet beverage[$]	Percentage of youngest children 6–23 months of age who consumed a sweet beverage during the previous day
Bottle feeding for infants[$]	Percentage of youngest children 0–23 months of age who were fed from a bottle with a nipple during the previous day
Women with body mass index <18.5 kg/m^2 [0]	[1]Percentage of women aged 15-49 with a youngest child < 5 years who have BMI below normal (BMI <18.5 kg/m2) ; [2]Percentage of women aged 15-49 whose BMI is below normal (BMI <18.5 kg/m^2)
Consumed IFA 100+ days	Percentage of mothers aged 15-49 who consumed iron folic acid for 100 days or more during the last pregnancy in last five years preceding the survey
Diarrhea in the last two weeks[0]	[1]Percentage of youngest children under age five who had diarrhea in the two weeks preceding the survey; [2]Percentage of children under age 5 who had diarrhea in the 2 weeks preceding the survey
ARI in the last two weeks[0]	[1]Percentage of youngest children under age five who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey; [2]Percentage of children under age five who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey
Underlying determinants	
Women who are literate[0]	[1]Percentage of women aged 15-49 with a birth in five years preceding the survey who are literate i.e., those who completed standard 6 or higher and can read a whole sentence; [2]Percentage of women aged 15-49 who are literate i.e., those who completed standard 9 or higher and can read a whole sentence or part of a sentence.
Women with ≥10 years education[0]	[1]Percentage of women aged 15-49 with a birth in five years preceding the survey with 10 or more years of schooling; [2]Percentage of women aged 15-49 with 10 or more years of schooling
Girls 20-24 years married before age of 18 years[0]	[1]Percentage of women aged 20-24 years with a birth in five years preceding the survey who were married before age 18 years; [2]Percentage of women aged 20-24 years who were married before age 18 years
Women 15-19 years with child or pregnant	Percentage of currently married women aged 15-49 who had their first birth before age 20 years and in the five years preceding the survey
HHs with improved drinking water source[0]	[1]Percentage of youngest children under age 5 living in household that use an improved source of drinking water; [2]Population living in households that use an improved sanitation facility
HHs with improved sanitation facility[0]	[1]Percentage of youngest children under age 5 living in household that uses improved toilet facility; [2]Population living in households that use an improved sanitation facility
HHs with hand washing facility[^$]	Percentage of youngest children under age 5 living in household that had soap and water for washing hands
Open defecation[@]	Percentage of youngest children under age 5 living in household that has no toilet facility/defecates in open
Safe disposal of feces[$]	Percentage of youngest children living with mother whose stools were disposed of safely
HHs with BPL card[@]	Percentage of youngest children under age 5 living in households with BPL card
HHs with electricity[0]	[1]Percentage of youngest children under age 5 living in household that has electricity; [2]Population living in households with electricity

^ Indicator not available in NFHS-3. $ Indicator not available in NFHS-5 factsheets/state reports [0]Indicator comparable between NFHS-3 and NFHS-4 but differs slightly from NFHS-5. @ Indicator not available in NFHS-5 factsheets but available in NFHS-5 states reports.
[1] Definition per NFHS-3/NFHS-4. [2] Definition as per NFHS-5 factsheet.

Indicator definition

Interventions	Definition
Demand for FP satisfied@	Percentage of currently married women aged 15-49 with demand for family planning satisfied by modern methods
Iodized salt[0]	[1]Percentage of women aged 15-49 living in HHs that use iodized salt; [2]Percentage of households using iodized salt
Any ANC visits[$]	Percentage of women aged 15-49 with a live birth in the five years who received at least one ANC for the last birth
ANC first trimester	Percentage of women (15-49 years of age) attended by any provider during the first trimester of pregnancy that led to the birth of the youngest child in the last 2 years
≥ 4ANC	Percentage of mothers aged 15-49 who had at least 4 antenatal care visits for last birth in the 5 years before the survey
Received MCP card	Percentage of mothers who registered last pregnancy in the 5 years preceding the survey for which she received a Mother and Child Protection (MCP) card
Received IFA tab/syrup@	Percentage of women who received IFA (given or purchased) tablets during the pregnancy for their most recent live birth in the 5 years preceding the survey
Tetanus injection	Percentage of women whose last birth was protected against neonatal tetanus (for last birth in the five years preceding the survey)
Deworming- pregnancy@	Percentage of women who took an intestinal parasite drug during the pregnancy for their most recent live birth in the 5 years preceding the survey
Weighing- pregnancy@	Percentage of women aged 15-49 with a live birth in the five years preceding the survey who were weighed during ANC for the last birth
Birth preparedness counselling[$]	Percentage of women who had at least one contact with a health worker in the three months preceding the survey and were counselled on birth preparedness; calculated among women aged 15-49 who gave birth in the five years preceding the survey
Breastfeeding counselling@	Percentage of women who met with a community health worker in the last three months of pregnancy and received advice on breastfeeding (for the last pregnancy in the five years preceding the survey)
Counselling on keeping baby warm@	Percentage of women who met with a community health worker in the last three months of pregnancy and received advice on keeping the baby warm for their most recent live birth in the five years preceding the survey
Cord care counselling^@	Percentage of women who met with a community health worker in the last three months of pregnancy and received advice on cord care for their most recent live birth in the five years preceding the survey
Food supplementation - pregnancy@	[1]Percentage of youngest children under age 5 whose mother received supplementary food from AWC during pregnancy; [3]Among children under 6 years, percentage whose mother received specific benefits from AWC during pregnancy: supplementary food
Health & nutrition education – pregnancy@	[1]Percentage of mothers who received health and nutrition education from an Anganwadi Centre (AWC) during last pregnancy in the five years preceding the survey; [3]Among children under 6 years, percentage whose mother received specific benefits from AWC during pregnancy: health and nutrition education
Malaria prevention- use of bed nets^[$]	Percentage of women who used mosquito net during the pregnancy for their most recent live birth in the 5 years preceding the survey
Institutional birth[0]	[1]Percentage of women aged 15-49 who gave birth in health/institutional facility for their most recent live birth in the 5 years preceding the survey; [2]Percentage of live births to women aged 15-49 in the five years preceding the survey that took place in a health/institutional facility
Financial assistance (JSY)@	Percentage of women who received financial assistance under JSY for their most recent live birth that took place in institutional facility in the 5 years preceding the survey
Skilled birth attendant[0]	[1]Percentage of women whose last delivery was attended by a skilled health personnel for their most recent live birth in the 5 years preceding the survey; [2]Percentage of births attended by skilled health personnel for births in the 5 years before the survey
Postnatal care for mothers	Percentage of mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery for their most recent live birth in the five years preceding the survey
Postnatal care for babies	Percentage of children who received postnatal care from a doctor /nurse /LHV /ANM /midwife /other health personnel within 2 days of delivery for last birth in the 5 years before the survey
Food supplementation – postnatal@	[1]Percentage of youngest children under age 5 whose mother received supplementary food from AWC while breastfeeding; [3]Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: supplementary food
Health & nutrition education – postnatal@	[1]Percentage of youngest children under age 5 whose mother received health check-ups from AWC while breastfeeding; [3]Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: health and nutrition education
Full immunization[0]	[1]Percentage of youngest living children aged 12-23 months fully vaccinated based on information from either vaccination card or mother's recall; [2]Percentage of children aged 12-23 months fully vaccinated based on information from either vaccination card or mother's recall
Vitamin A – early childhood[0]	[1]Percentage of youngest children aged 6-59 months who received Vitamin A supplementation in the last 6 months preceding the survey; 2 Percentage of children aged 9-35 months who received a vitamin A dose in the last 6 months
Pediatric IFA[0@]	Percentage of youngest children aged 6-59 months who received iron supplements in the past 7 days preceding the survey
Deworming – early childhood[0@]	Percentage of youngest children aged 6-59 months who received deworming tablets in the last 6 months preceding the survey
Care seeking for ARI[0]	[1]Percentage of youngest children under age 5 years with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider; [2]Percentage of children under age 5 years with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider
ORS during diarrhea[0]	[1]Percentage of youngest children under age 5 years with diarrhea in the 2 weeks preceding the survey who received oral rehydration salts (ORS); 2Percentage of children under age 5 years with diarrhea in the 2 weeks preceding the survey who ORS
Zinc during diarrhea[0]	[1]Percentage of youngest children under age 5 years with diarrhea in the 2 weeks preceding the survey who received zinc; [2]Percentage of children under age 5 years with diarrhea in the 2 weeks preceding the survey who received zinc
Food supplementation (children 6-35 months)[$]	Percentage of youngest children aged 6-35 months who received food supplements from AWC in the 12 months preceding the survey
Weighing – early childhood@	Percentage of youngest children under age 5 who were weighed at AWC in the 12 months preceding the survey
Counselling on child growth@	Percentage of youngest children under age 5 whose mother received counselling from an AWC after child was weighed in the 12 months preceding the survey

^ Indicator not available in NFHS-3. [$]Indicator not available in NFHS-5 factsheets/state reports. @Indicator not available in NFHS-5 factsheets but available in NFHS-5 states reports. [0]Indicator comparable between NFHS-3 and NFHS-4 but differs slightly from NFHS-5.
[1]Definition per NFHS-3/NFHS-4. [2]Definition as per NFHS-5 factsheet. [3]Definition as per NFHS-5 state reports.

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ABOUT POSHAN

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India (POSHAN) is a multi-year initiative that aims to support the use of data and evidence in decision-making for nutrition in India. It is supported by the Bill & Melinda Gates Foundation and led by IFPRI in India.
http://poshan.ifpri.info/

ABOUT DATA NOTES

POSHAN Data Notes focus on data visualization to highlight geographic and/or thematic issues related to nutrition in India. They draw on multiple sources of publically available data.

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