

Data Note

SEPTEMBER 2021

MAHARASHTRA

State Nutrition Profile Maharashtra

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.

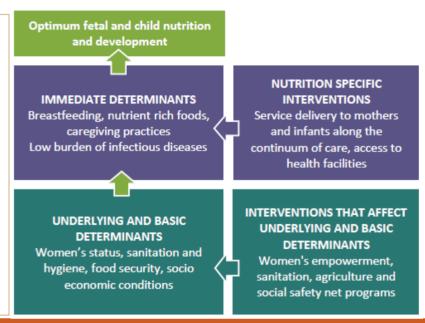
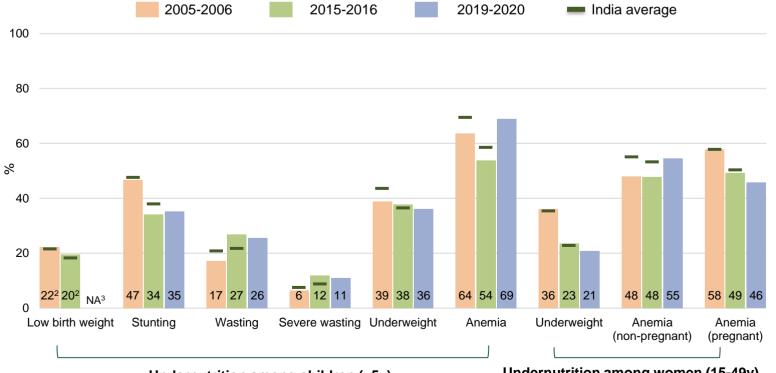


Figure 1. Trends in undernutrition outcomes 2005-2006, 2015-2016, 2019-2020



Undernutrition among children (<5y)

Undernutrition among women (15-49y)

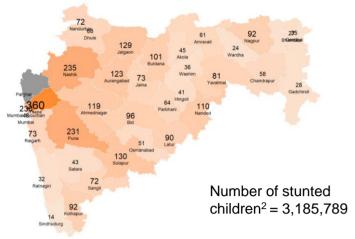
Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), & NFHS-5 state factsheets (2019-2020). Note: Adult nutrition outcomes are based on the woman dataset, while child nutrition outcomes are based on all child data.

¹WHO. 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). 2In NFHS-3, 25.7% of data was missing, while 4.9% of data was missing in NFHS-4. ³NA 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

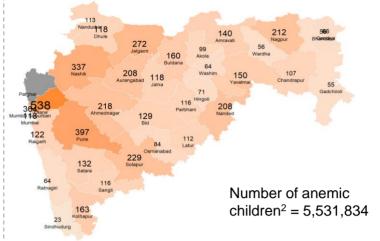


Note: Number in '000s in the above figure

	Highest burden districts	
1	Thane	359.615
2	Nashik	235,325
3	Pune	230,914
4	Mumbai Suburban	229,629
5	Solapur	130,435

No. of districts with public health concern¹: 36 of 36

Map 2. Anemia



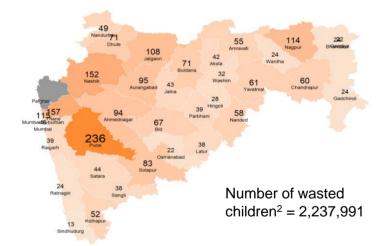
Note: Number in '000s in the above figure

	Highest burden districts	
1	Thane	537,615
2	Pune	396,620
3	Mumbai Suburban	363,757
4	Nashik	337,127
5	Jalgaon	271,956

No. of districts with public health concern¹: 36 of 36

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

Map 3. Wasting

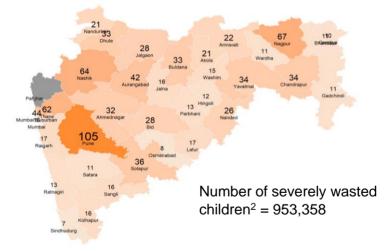


Note: Number in '000s in the above figure

Highest burden districts	
Pune	236,180
Thane	156,891
Nashik	151,679
Mumbai Suburban	114,814
Nagpur	113,687
	Pune Thane Nashik Mumbai Suburban

No. of districts with public health concern¹: 36 of 36

Map 4. Severe Wasting



Note: Number in '000s in the above figure

	Highest burden districts	
1	Pune	105,303
2	Nagpur	66,875
3	Nashik	63,571
4	Thane	61,699
5	Mumbai Suburban	44,444

No. of districts with public health concern1: 36 of 36

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.

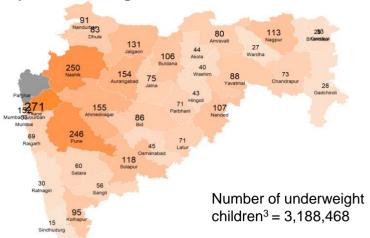
Note: The newly formed districts, for which no spatial boundaries were available, were not depicted on the maps.

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

²The total number of children <5 years is 8,917,169.

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

Map 5. Underweight children



Highest burden districts

1 Thane 271,474

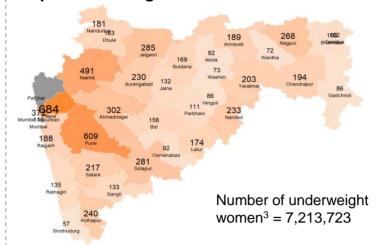
Note: Number in '000s in the above figure

2 Nashik3 Pune249,823245,958

4 Ahmadnagar 154,7165 Aurangabad 154,353

No. of districts with public health concern¹: 36 of 36.

Map 6. Underweight women



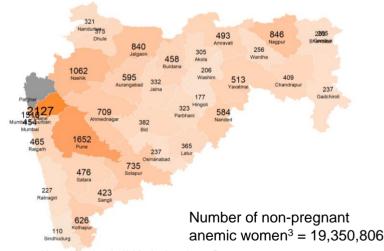
Note: Number in '000s in the above figure

	Highest burden districts	
1	Thane	683,614
2	Pune	608,660
3	Nashik	490,549
4	Mumbai Suburban	372,130
5	Ahmadnagar	301,662

No. of districts with public health concern¹: 36 of 36

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

Map 7. Anemia among non-pregnant women



Note: Number in '000s in the above figure

Highest burden distr	ricts
1 Thane	2,126,799
2 Pune	1,652,076
3 Mumbai Suburban	1,515,974
4 Nashik	1,061,578
5 Nagpur	846,486

No. of districts with public health concern¹: 36 of 36

Map 8. Anemia among pregnant women²



Note: Number in '000s in the above figure

	Highest burden districts	
1	Nashik	97,867
2	Jalgaon	54,726
3	Mumbai City	41,118
4	Aurangabad	37,876
5	Ahmadnagar	36,463

No. of districts with public health concern¹: 20 of 27

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. Note: The newly formed districts, for which no spatial boundaries were available, were not depicted on the maps. 1 Public health concern is defined as \geq 20% for underweight (children), \geq 10% for underweight (women), \geq 40% for anemia among non-pregnant women, and \geq 40% for anemia among pregnant women (WHO 2011). 2 Grey areas in map 8 indicates districts for which data are not available. 3 The total number of children <5 years is 8,917,169, pregnant women 15-49 years is 2,309,503, and non-pregnant women 15-49 years is 33,176,376.

Figure 2. Trends in overweight/obesity & NCDs¹ 2005-2006, 2015-2016, 2019-2020

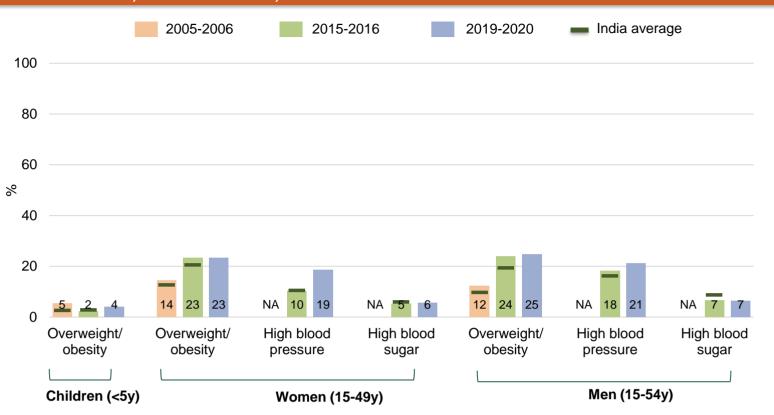


Table 1. Overweight/obesity & NCDs¹ at district-level 2015-2016, 2019-2020

Category	Outcomes	Worst performing districts (pp) ⁵	Best performing districts (pp) ⁵	Highest burden districts (thousands) ²	No of districts with public health concern ³ (total=38)
		Difference between (2019-2020) & (2015- 2016)	Difference between (2019-2020) & (2015- 2016)	2019-2020	2019-2020
Children <5 years	Overweight/ obesity	Mumbai Su⁴: +8.8 Nagpur: +8.6	Dhule: -3.1 Ahmednagar: -2.9	Mumbai Su ⁴ : 64 Thane: 44	0
Women	Overweight/ obesity	Dhule: +9.9 Parbhani: +9.8	Nagpur: -9.9 Mumbai: -8.9	Mumbai Su⁴:1232 Thane: 1104	22
(15-49 years)	High blood pressure	Sangli: +14.6 Sindhudurg: +13.6	Mumbai: -0.4	Thane: 723 Mumbai SU⁴:613	13
	High blood sugar	Jalna: +2.9 Buldana: +2.8	Mumbai: -2.9 Solapur: -1.9	Mumbai Su ⁴ :247 Thane: 235	0
	Overweight /obesity	Data not available a	t district level		
Men (15-54 years)	High blood pressure	Bid: +15.4 Nashik: +12.9	Mumbai: -12 Amravati: -10	Thane: 1021 Mumbai Su ⁴ :776	20
	High blood sugar	Jalna: +5.3 Bid: +4.4	Akola: -6.3 Bhandara: -6.3	Mumbai Su ⁴ :271 Pune" 229	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.

¹NCDs: non-communicable diseases. ²Burden: The headcount was calculated as the product of the 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. ³Public 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). Source: WHO (2011).

⁴District codes: Mumbai Su: Mumbai Suburban. ⁵The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts except Thane are comparable across periods.

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

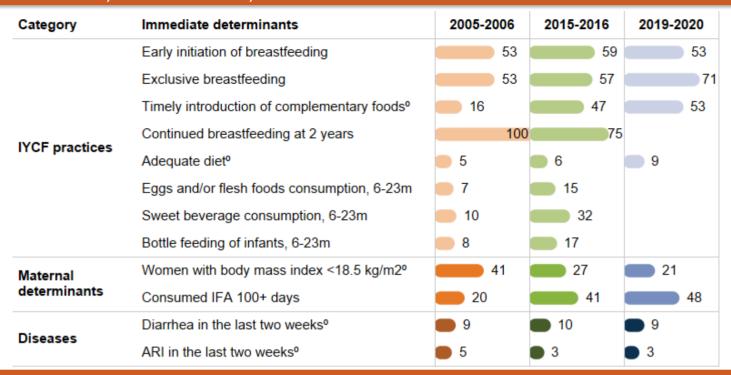


Table 2. Immediate determinants at district-level 2015-2016, 2019-2020

Category	Immediate determinants	Worst performing districts (pp) 4	Best performing districts (pp) ⁴	Top coverage districts (%) ¹
		Difference between (2019-2020) & (2015-2016)	Difference between (2019-2020) & (2015-2016)	2019-2020
	Early initiation of breastfeeding	Satara: -21.1 Jalgaon: -20	Buldana: +33.7 Bhandara: +27.5	Washim: 68.8 Nagpur: 68.4
IYCF	Exclusive breastfeeding	Hingoli: -25.3 Satara: -2.6	Washim: +25.6 Amravati: +19.9	Nandurbar: 86.6 Washim: 85.9
practices	Timely introduction of complementary foods ⁰	Akola: -1.2	Not applicable ²	Akola: 46.7
	Adequate diet ⁰	Sindhudurg: -18.2 Bid: -13.1	Nashik: +13.5 Kolhapur: +13.4	Mumbai Su³: 17.8 Satara: 15.9
Maternal determinants	Women with BMI<18.5 kg/m2 ⁰	Jalgaon: +1.3 Mumbai Su³: +0.6	Gondiya: -17 Akola: -14.2	Mumbai: 12.0 Mumbai Su³: 12.2
determinants	Consumed IFA 100+ days	Gondiya: -25.7 Hingoli: -19.6	Buldana: +39.6 Sindhudurg: +30.3	Mumbai: 72.4 Gadchiroli: 70.8
Diagona	Diarrhea in the last two weeks ⁰	Washim: +11.4 Jalna: +9.1	Latur: -10.6 Sangli: -8.8	Sindhudurg: 0.6 Mumbai Su³: 1.7
Diseases	ARI in the last two weeks ⁰	Chandrapur: +5.8 Akola: +4.5	Raigarh: -5 Sangli: -4.4	Yavatmal: 0.0 Sangli: 0.3

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. ¹For 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. ²Prevalence did not increase or decrease in any of the districts ³District codes: Mumbai Su: Mumbai Suburban ⁴The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts except Thane are comparable across periods.

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

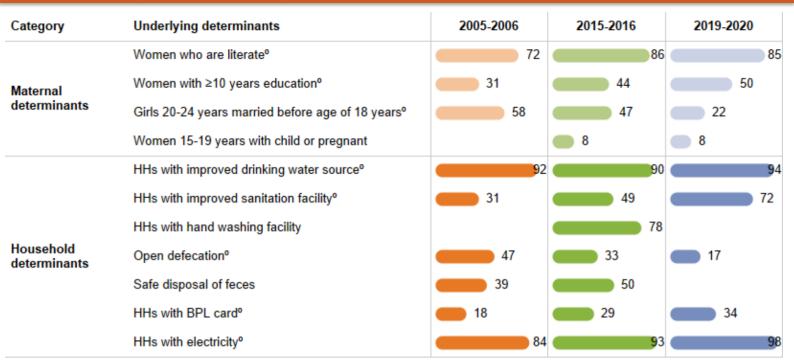


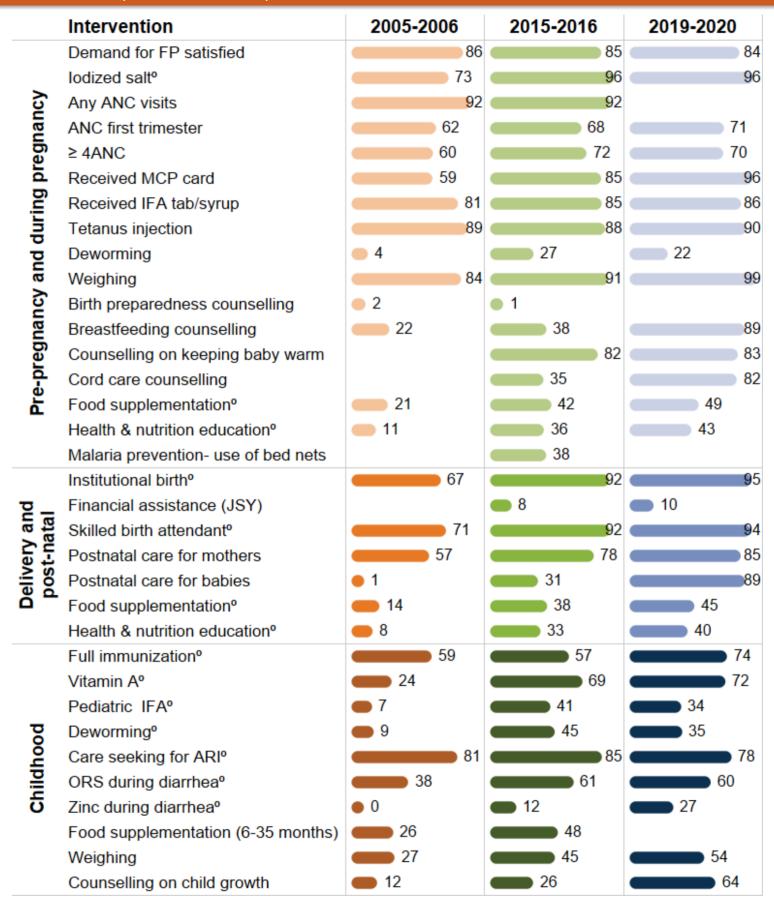
Table 3. Underlying determinants at district level 2015-2016, 2019-2020

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
	Women who are literate ⁰	Solapur: -12.9 Parbhani: -12	Nandurbar: +19.1 Dhule: +9.2	Nagpur: 94.6 Mumbai: 94.3
Maternal	Women with ≥10 years education ⁰	Bhandara: -16.1 Ahmednagar: -12	Mumbai Su³: +19.3 Mumbai: +16.7	Mumbai: 71.1 Nagpur: 67.6
determinants	Girls 20-24 years married before age of 18 years ⁰	Not applicable ²	Chandrapur: -34.7 Kolhapur: -34.6	Parbhani: 48 Bid: 43.7
	Women 15-19 years with child or pregnant	Washim: +6.9 Nashik: +5.8	Jalna: -11.4 Mumbai Su³: -8.4	Solapur: 18.6 Osmanabad: 16.1
	HHs with improved drinking water source ⁰	Washim: -12.7 Nashik: -8.1	Chandrapur: +19.3 Nandurbar: +16.3	Mumbai: 100 Mumbai Su³: 99.8
Household determinants	HHs with improved sanitation facility ⁰	Not applicable ²	Mumbai Su ³ : +40 Osmanabad: +38.4	Nagpur: 88.9 Sindhudurg: 87.9
	HHs with electricity ⁰	Ahmednagar: -1.9 Parbhani: -0.6	Nandurbar: +26.5 Dhule: +13.4	Mumbai: 99.6 Nagpur: 99.5

Source:NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state and district factsheets and state reports (2019-2020). . pp: percentage points 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

Olndicator definition differs slightly between NFHS-4 and NFHS-5. 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. Prevalence did not increase or decrease in any of the districts. District codes: Mumbai Su: Mumbai Suburban. The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts except Thane are comparable across periods.

Figure 5. Trends in 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).

⁰Indicator 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

District name	Pre- pregnancy						_	Pregnancy	>							Del	ivery &	Delivery & postnatal	[za]					Ea	Early childhood	pooq				
	Pemand for FP beitrifes tles besibol	stisiv DNA ynA	NA AMC	Received MCP card	Received IFA	tab/syrup	Tetanus injection Deworming	gnihgiəW	Birth preparedness counselling Breastfeeding Suilbastroo	no gnillegnuo mrew yded gnigeek	Cord care counselling	Food supplementation	Health & nutrition education 	stan bad to asu	Institutional birth Financial assistance	(JSY) Skilled birth attendant	Postnatal care for	mothers Postnatal care for	babies Food supplementation	Health & nutrition	noitezinummi llut	A nimstiV	AAI sintsibes9	Deworming	Lare seeking for ARI	694'ring dirinb CAO	Food supplementation	(sdtnom 28-8) gnidgieW	Counselling on child	growth
MAHARASHTRA	96.2	70	70.9 70.3	95.5	.5 85.7	5.7 90.1	0.1 22.4							94.	1.7 10.	.2 93.	.8 85.	.4 89.	1		73.5	72.2			7.5 5	9.5 27	.3			
Ahmednagar	95.5	71	71.4 76.6	94.4	_	87.0 91	91.2 17.5							97.	6 6.7	1 95.0	6.06 0.	9 92.9	6		83.5	6.69		ω	84.2 6	66.0 28.	E.			
Akola	95.2	75.1	.1 76.3	.3 98.3		88.2 92	92.9 30.2							97	.7 15	.8 86.	.4 82.	.3 92	2		69.5	88.3			75.8 7	70.6 41.1	.1			
Amravati	98.5	89.1	71.7	7 99.1		83.9 93	93.8 35.8							91	91.3 17.	.2 89.	7 80	.2 79	4.		92.5	85.9		1	78.5 6	61.5 20.	5.			
Aurangabad	98.9	65.2	57.2	.2 95.0		85.8 86	86.2 20.1							94	94.8 6.6	6 96.3	.3 76.4	.4 82.6	9		56.7	69.2		9	64.2 5	55.1 30.8	8.			
Bhandara	95.4	83.7	1.7 79.0	99.4		97.9 94	94.8 50.2							100	100.0	.2 98.4	.4 87.5	.5 90.1	1		87.0	83.9		9,	55.3					
Bid	96.3	9:29	9.99	9.76 8.	.6 85.2		78.3 18.5							94	94.0 3.5	5 90.8	8.67 8.	9.08 8.	9		75.9	82.4		9	62.9	58.6 17.	.7			
Buldana	97.8		73.6 72.7	.7 100.0		94.3 95	95.5 39.7							93	93.9 18.	1 92	.4 86.7	.7 84.8	∞		85.9	89.2		9	67.4 5	56.1 32.	5.			
Chandrapur	97.4		76.6 68.5	.5 100.0		94.9 94	94.0 43.0							.66	6 11	96 6	.5 92.	.3 97.0	0		95.0	8.98		1	72.7					
Dhule	98.0	61.2	2 63.2	.2 93.7		80.3 80	80.5 21.9							77	77.2 9.1	1 84.2	77	.2 74.9	6		56.6	55.7		1	75.2 5	55.6 23.	.2			
Gadchiroli	7.76	84	84.6 86.8	0.86 8.9	_	96.5 91	91.4 45.3							97.	7.3 35.	1 98	2 91	.5 93.	7		97.9	88.1								
Gondiya	0.86		69.0 66.2	.2 98.7	1	95.9	98.3 52.6							99.1	9.1 26.3	.3 98.3	.3 90.0	.0 89.2	2		88.2	77.4		1	73.6					
Hingoli	0.66		82.5 66.6	8.86 9.8		79.6 88	88.5 27.7							94	94.0 13.	.3 95.3	.3 82.4	.4 85.1	1		76.9	72.1		9	69.5	37.5 22	1.			
Jalgaon	8.96		60.3 58.4	.4 91.0		73.4 82	82.2 11.2							86	86.5 4.8	8 81.9	.9 74.5	.5 78.5	2		61.3	57.9		9	61.8					
Jalna	9.76		56.0 58.4	.4 96.1	.1 83.2		78.3 14.6							92	92.8 9.0	98	.5 74.0	18	6:		54.3	70.1		e	68.7 4	48.1 14.	∞.			
Kolhapur	7.76	71	71.5 81.8	8 95.3		92.8 88	88.3 20.4							66	99.2 14.	.8 93.6	.6 95.	.2 91.5	5		67.2	0.99		2	8.62					
Latur	97.8	74.6	1.6 72.6	6 100.0		98 9.06	86.4 34.5							94	94.7 6.1	1 93.4	.4 93.3	.3 92.5	2		79.2	88.7		9	64.5 6	65.4 32	.3			
Mumbai	98.3	86.2	5.2 87.1	.1 93.1		89.0 95	95.4 13.3							.66	9.5 8.6	98	.3 90.6	6.56 9.9	6			77.8								
Mumbai Suburban	99.5	58.1	3.1 72.2	2 92.6	.6 75.7		90.1 20.6							86	98.1 7.3	3 98.5	.5 91.5	.5 97.2	2			73.6								
Nagpur	97.6		78.1 71.4	.4 96.6		93.8 92	92.8 37.0							100	100.0	9.96	.6 91.4	.4 90.8	8		89.4	92.6		9	65.0					
Nanded	6.96		62.5 53.5			80.0	89.8 18.6							94	94.8 8.1	92	.6 76.1	.1 79.3	3		75.7	70.5		~	81.6 6	60.4 19.	6.			
Nandurbar	97.6		51.0 58.2	.2 99.2		81.6 91	91.0 16.3							76.3	5.3 26.8	77	.9 74.	.4 74.2	2		72.4	68.2		1	77.2 6	64.7 29.1	.1			
Nashik	91.6	6.99	\dashv	.4 96.0		79.7	81.3 12.5							ე6	90.5 12.	7	.9 76.5	.5 83.4	4		70.4	58.7		15	76.3 6	62.2 13.4	4.			
Osmanabad	97.5		_	\rightarrow	_	1.3 91.7	1.7 17.5							86	98.1 6.6		.0 94.4	_	1		89.3	67.9		15	71.2 4	43.9 15.1	.1			
Palghar	86.5	84.7	1.7 86.3				94.4 11.8							94	18	.5 95.7	7. 97.0	.0 96.5	2		94.0	72.7			6.07					
Parbhani	95.1	58.6	3.6 47.4	.4 89.0		68.9 82	82.0 14.7							85	85.6 12.	.8 90.8	.8 64.	.4 66.8	8		52.0	52.9		7	74.5 4	49.8 18.	.1			
Pune	97.0		79.6 68.6	.6 93.1	.1 85.7	5.7 90.7	0.7 15.7							98	98.0 4.9	98	.5 84.	.2 95.2	2		58.1	6.69		5	94.3					
Raigarh	80.3	83	83.8 83.1	.1 98.4		91.9 96	96.6 18.2							96	96.6 11.	0 97	93.0	.0 92.9	6		92.3	73.8		~	82.4					
Ratnagiri	91.1	64	64.6 78.6	0.76 9.		87.9 93	93.2 22.7							16	97.8 8.7	95	7.68 9.7	.7 92.2	2		77.2	77.3								
Sangli	98.8		66.0 80.1	1.1 97.1		91.6	97.4 33.3							86	98.0 13.	.1 97	92.6	95.0	0		75.0	80.4								
Satara	93.9		77.5 81.7	7 96.7	7 91.1		93.8 16.3							97.1	7.1 8.9	9 97.9	.9 94.	.5 95.1	1		82.8	78.3		1	7 7.77	72.4 24	5.			
Sindhudurg	94.9		70.3 73.4	.4 100.0		93.3 96	96.8 32.8							100	100.0	86	.96 96.	.7 98.2	2		76.3	78.9								
Solapur	96.5		81.3 81.9	0.96 6	.0 89.2	_	90.5 17.8							96	96.2 8.4	4 96.3	89	.6 89.2	2		83.6	62:9		8	80.7	51.3 34.	.7			
Thane	97.5		58.9 70.2	93.4		86.9 97	97.4 28.2							93.	3.6 7.0	93.	.9 87.	.2 93.3	3		74.9	68.7								
Wardha	97.9	87.9	70.4	.4 98.6	-	91.3 93	93.4 47.9							86	98.8 12.	.3 99	0.0	90.5	2		92.4	87.1								
Washim	96.5	63.4	1.4 60.0		_		79.5 19.4							92	92.9 16.	.7 83.1	.1 83.4	_	4		71.6	77.9				57.9 18.	9.			
Yavatmal	94.6		77.1 66.9	8.86 6.9		88.3 94	94.6 26.3							96	96.3 16.6	9.96	.8 85.6	.6 91.7	7		74.7	71.0		O1	97.3					

Not Available

%08>-09

40-<60%

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

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 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, 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
	ANC first trimester	Parbhani: -13.8 Nagpur: -9.8	Osmanabad: +28.7 Mumbai: +25.6	Amravati: 89.1 Wardha: 87.9
	≥4 ANC visits	Parbhani: -32 Nanded: -17	Sangli: +14.4 Osmanabad: +14.4	Osmanabad: 89.2 Mumbai: 87.1
Pregnancy	Received MCP Card	Not applicable ¹	Nandurbar: +35.9 Ahmednagar: +20	SIndhudurg: 100 Buldana: 100
	Tetanus injection	Washim: -11.8 Jalna: -9.8	Sindhudurg: +16.3 Nandurbar: +12	Gondiya: 98.3 Sangli: 97.4
	Institutional birth°	Amravati: -2.2 Parbhani: -1.1	Nandurbar: +20 Buldana: +10.4	Sindhudurg: 100 Bhandara: 100
Delivery and	Skilled birth attendant°	Akola: -9.2 Bid: -5	Nandurbar: +13.6 Ratnagiri: +11	Wardha: 99 Osmanabad: 99
post-natal	Postnatal care for mothers	Parbhani: -19.4 Aurangabad: -10.5	Raigarh: +28.7 Nandurbar: +21.2	Palghar: 97 Sindhudurg: 96.7
	Postnatal care for babies°	Not applicable ¹	Osmanabad: +79.7 Chandrapur: +75.2	Sindhudurg: 98.2 Mumbai Su ² : 97.2
	Full immunization	Pune: -22.4 Jalna: -16.7	Raigarh: +44.4 Ahmednagar: +41.5	Gadchiroli: 97.9 Chandrapur: 95
	Vitamin A supplementation°	Dhule: -21.5 Parbhani: -13.4	Latur: +27.7 Buldana: +25.4	Nagpur: 95.6 Buldana: 89.2
Early childhood	Care seeking for ARI°	Bhandara: -44.7 Jalgaon: -33.1	Yavatmal: +13.8 Raigarh: +5.6	Yavatmal: 97.3 Pune: 94.3
	ORS treatment during diarrhea°	Buldana: -22.4 Osmanabad: -22.1	Satara: +25 Ahmednagar: +20.2	Satara: 72.4 Akola: 70.6
	Zinc treatment during diarrhea°	Washim: -10.8 Amravati: -9.5	Nandurbar: +29.1 Latur: +28.3	Akola: 41.1 Solapur: 34.7

Key takeaways

Children: Stunting prevalence declined by 13 percentage points (pp) from 2006 to 2016 and remained stable thereafter. Wasting increased by 10pp from 2006 to 2016 while remaining stable from 2016 to 2020. Underweight declined slightly by 1-2pp over time. Anemia declined by 10pp from 2006 to 2016 but increased by 15pp from 2016 to 2020.

Overweight/obesity declined by 3pp from 2006 and 2016 but increased by 2pp from 2016 to 2020.

Women: Underweight declined by 13pp from 2006 to 2016 and continued to decline by 2pp from 2016 to 2020. Anemia among non-pregnant women remained stable from 2006 to 2016 but increased by 7pp from 2016 to 2020; anemia among pregnant women declined by 9pp from 2006 to 2016 and continued to decline by 3pp from 2016 to 2020.

Overweight/obesity increased by 9pp from 2006 to 2016 and remained stable from 2016 to 2020.

Men: Overweight/obesity increased by 12pp from 2006 to 2016 and remained stable from 2016 to 2020.

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

- *Outcomes*: Stunting (35%), underweight (36%), wasting (26%) and anemia in children (69%); anemia in non-pregnant (55%) and pregnant (46%) women
- *Immediate determinants:* Early initiation of breastfeeding (53%); timely complementary feeding (53%); Adequate diet (9%); 100+ IFA (48%)
- *Underlying determinants:* Women with ≥10 years education (50%)
- **Coverage of interventions:** Food supplementation (45-49%) and health and nutrition education (40-43%) for women; zinc during diarrhea (27%)

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. ⁰Indicator definition differs slightly between NFHS-4 and NFHS-5. ¹Prevalence did not increase or decrease in any of the districts. ²District codes: Mumbai Su: Mumbai Suburban. ³The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. All districts except Thane are comparable across 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 Overweight/obesity - women	Percentage of children aged 0-59 months who are overweight i.e., weight-for-height z score > 2SD 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 Percentage of youngest children 6–23 months of age who consumed a minimum acceptable diet during the previous
Adequate diet	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 ^{\$} Bottle feeding for infants ^{\$}	Percentage of youngest children 6–23 months of age who consumed a sweet beverage during the previous day 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 °	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/m²)
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 [®] Safe disposal of feces ^{\$}	Percentage of youngest children under age 5 living in household that has no toilet facility/defecates in open 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 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
Dowarming prognancy@	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
Weighing- pregnancy®	5 years preceding the survey Percentage of women aged 15-49 with a live birth in the five years preceding the survey who were weighed during
weighing- pregnancy	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
Birtii preparediless couriseiling	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
Dreastreeding counselling	advice on breastfeeding (for the last pregnancy in the five years preceding the survey)
Counselling on keeping baby	Percentage of women who met with a community health worker in the last three months of pregnancy and received
warm [@]	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
Cora care counceming	advice on cord care for their most recent live birth in the five years preceding the survey
Food supplementation -	¹ Percentage of youngest children under age 5 whose mother received supplementary food from AWC during
pregnancy@	pregnancy; ³ Among children under 6 years, percentage whose mother received specific benefits from AWC during
p. eg	pregnancy: supplementary food
Health & nutrition education -	¹ Percentage of mothers who received health and nutrition education from an Anganwadi Centre (AWC) during last
pregnancy@	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	Percentage of women who used mosquito net during the pregnancy for their most recent live birth in the 5 years
nets^\$	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
Llastin O mutuitian advantian	breastfeeding: supplementary food
Health & nutrition education –	¹ Percentage of youngest children under age 5 whose mother received health check-ups from AWC while
postnatal [@]	breastfeeding; ³ Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding; health and nutrition education
Full immunization ⁰	Percentage of youngest living children aged 12-23 months fully vaccinated based on information from either
i dii iiiiiidiii2diiOII	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
Vitariiii A – carry crindriood	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
r calatile ii /t	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
3	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
<u> </u>	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-	Percentage of youngest children aged 6-35 months who received food supplements from AWC in the 12 months
35 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
Alada da atama atama da bia da NELIO O Su	edicator not available in NEUS 5 factshoots/state reports. @ndicator not available in NEUS 5 factshoots but available in

[^]Indicator not available in NFHS-3. Indicator not available in NFHS-5 factsheets/state reports. Indicator not available in NFHS-5 states reports. Indicator comparable between NFHS-3 and NFHS-4 but differs slightly from NFHS-5.

¹Definition per NFHS-3/NFHS-4. ²Definition as per NFHS-5 factsheet. ³Definition as per NFHS-5 state reports.

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SUGGESTED CITATION

Gune, S., P.H. Nguyen, S.K. Singh, R. Sarwal, N. Bhatia, R. Johnston, W. Joe, E. Sarswat, and P. Menon. 2021. *State Nutrition Profile: Maharashtra*. POSHAN Data Note 48. New Delhi, India: International Food Policy Research Institute.

ACKNOWLEDGEMENTS

Financial support for this Data Note was provided by the Bill & Melinda Gates Foundation through POSHAN, led by the International Food Policy Research Institute. The funder played no role in decisions about the scope of the analysis or the contents of the Note.

We thank Long Quynh Khuong (Independent Researcher) for creating the maps, Nishmeet Singh (IFPRI) and Anjali Pant (IFPRI) for working with the dataset and Julie Ghostlaw (IFPRI) & Abhilasha Vaid (Consultant) for editing and reviewing the Note.

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Disclaimer: The maps used in this Data Note are based on the districts in NFHS-5 factsheets/reports. The boundaries shown do not imply any official endorsement or acceptance by IFPRI.

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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