

State Nutrition Profile: Uttarakhand

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 are based on data from multiple rounds of the National Family Health Surveys using estimates from reports, factsheets, or unit level data. In addition to standard prevalence-based analyses, this *Data Note* includes headcount-based analyses aligned to the POSHAN Abhiyaan monitoring framework to provide evidence that helps identify priority districts and the number of districts where public health concerns exist as per the WHO guidelines¹. This *Data Note* also includes a color-coded dashboard to compare the coverage of nutrition interventions by district. It concludes with key takeaways for children, women, and men, and identifies areas for improvement.

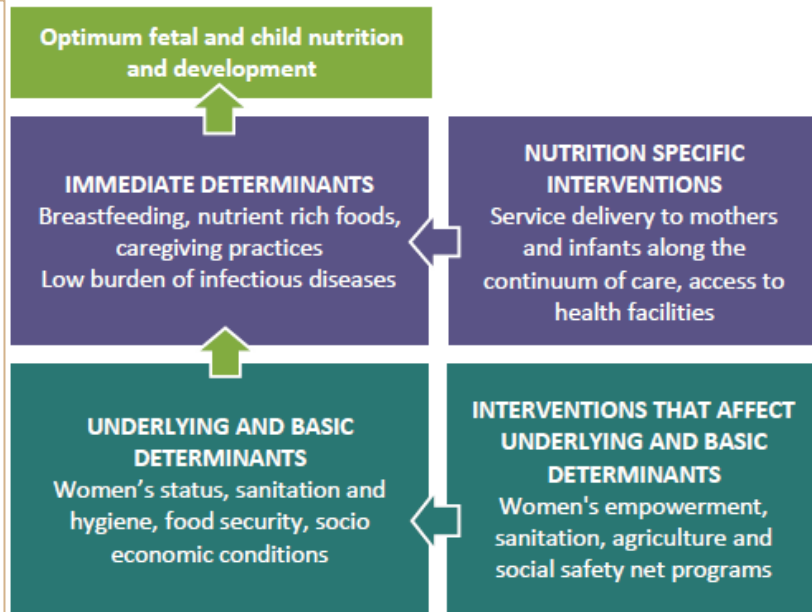
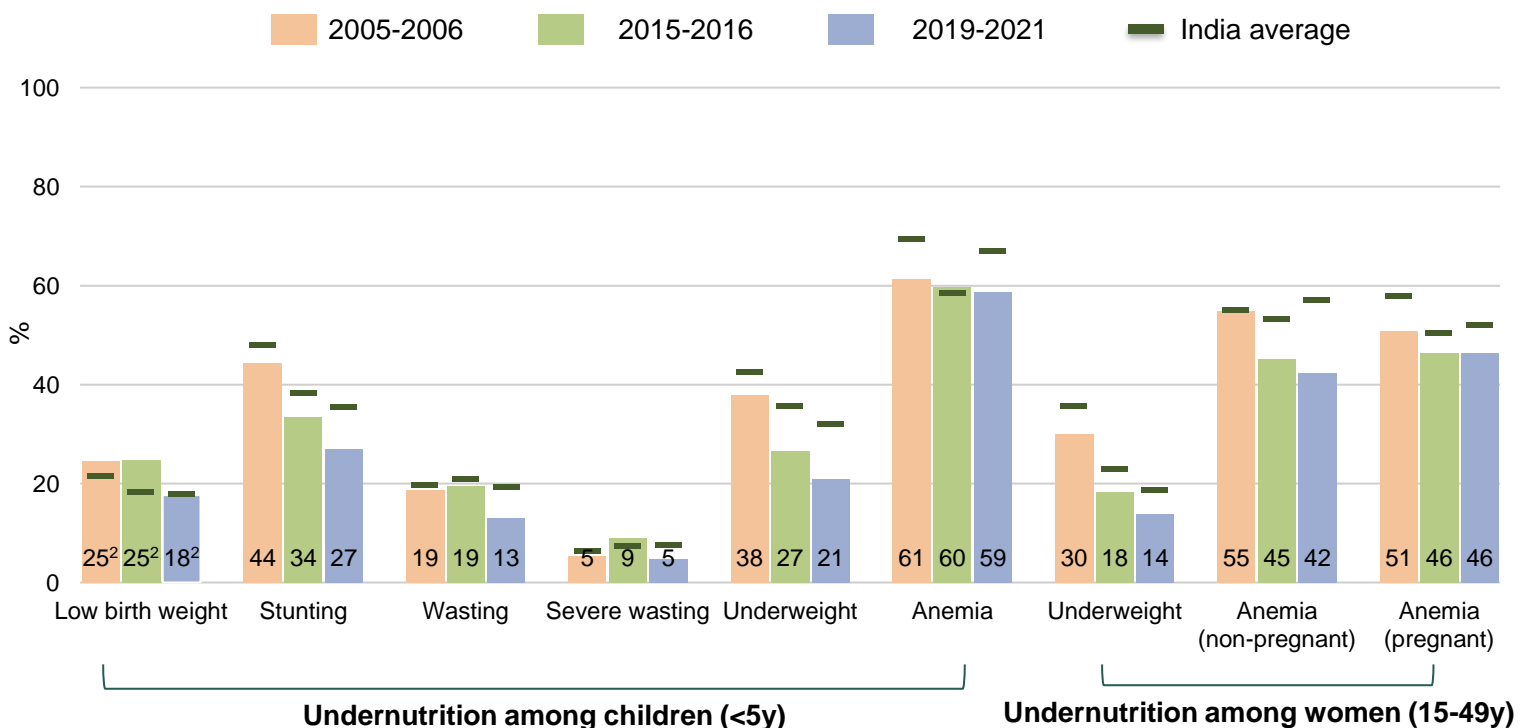


Figure 1. Trends in undernutrition outcomes 2005-2006, 2015-2016, 2019-2021



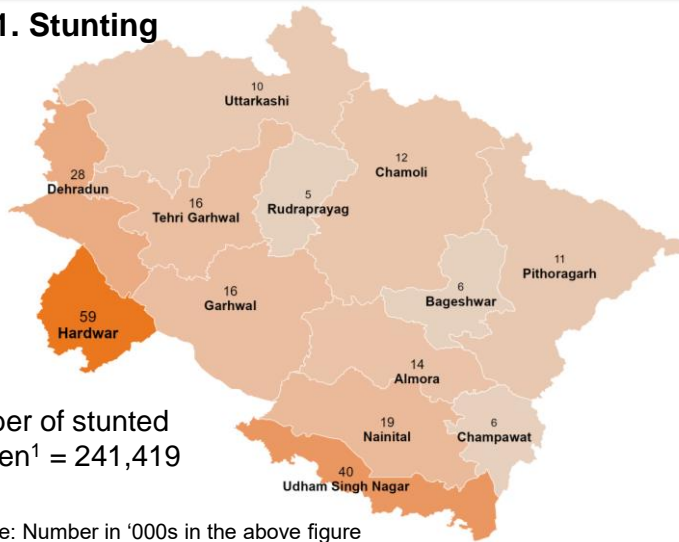
Source: NFHS-3 (2005-2006) national report and data [IFPRI estimates], NFHS-4 (2015-2016) national report, and NFHS-5 (2019-2021) national and state factsheets. Anemia among non-pregnant and pregnant women for 2005-2006 are IFPRI estimates using woman dataset.

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, NFHS-4, and NFHS-5, 75.7%, 37.4%, and 13.4% of data were missing, respectively.

Map 1 & 2. Number of stunted & anemic children <5y, 2019-2021

Map 1. Stunting



Number of stunted children¹ = 241,419

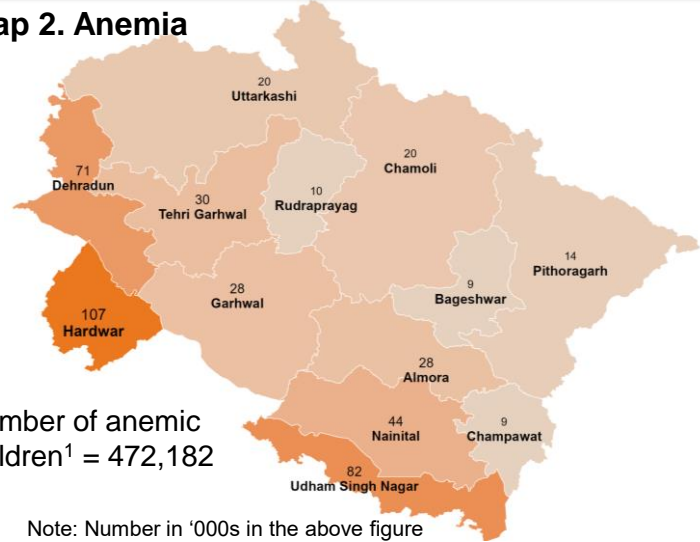
Note: Number in '000s in the above figure

Highest burden districts

1	Hardwar	58,539
2	Udham Singh Nagar	40,254
3	Dehradun	27,776
4	Nainital	19,038
5	Garhwal	16,458

No. of districts with public health concern²: 13 of 13

Map 2. Anemia



Number of anemic children¹ = 472,182

Note: Number in '000s in the above figure

Highest burden districts

1	Hardwar	106,864
2	Udham Singh Nagar	82,050
3	Dehradun	70,941
4	Nainital	44,141
5	Tehri Garhwal	30,326

No. of districts with public health concern²: 12 of 13

Map 3 & 4. Number of wasted children <5y, 2019-2021

Map 3. Wasting



Number of wasted children¹ = 117,533

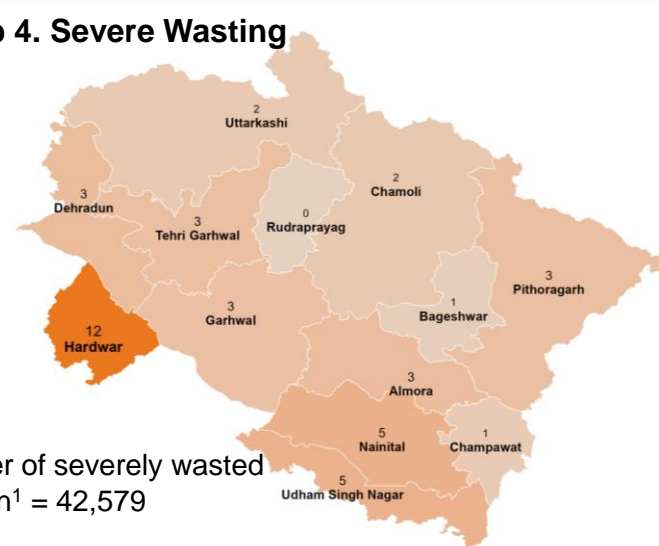
Note: Number in '000s in the above figure

Highest burden districts

1	Hardwar	30,899
2	Udham Singh Nagar	18,655
3	Dehradun	13,436
4	Nainital	11,505
5	Almora	9,033

No. of districts with public health concern²: 11 of 13

Map 4. Severe Wasting



Number of severely wasted children¹ = 42,579

Note: Number in '000s in the above figure

Highest burden districts

1	Hardwar	12,134
2	Nainital	4,811
3	Udham Singh Nagar	4,596
4	Almora	3,254
5	Dehradun	3,226

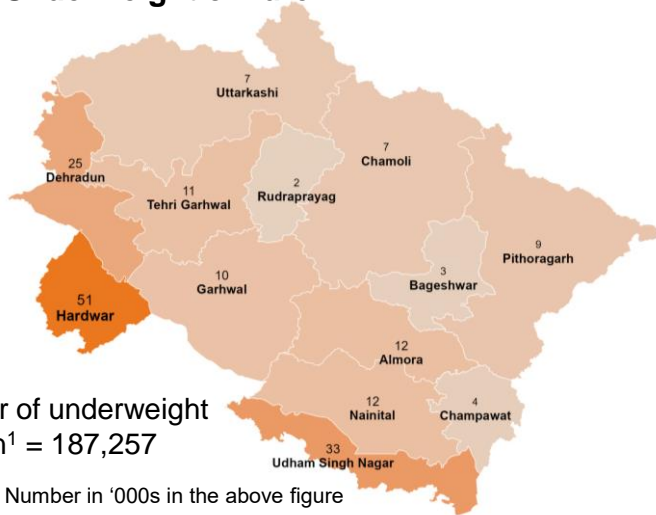
No. of districts with public health concern²: 13 of 13

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 (2019-2021) district factsheets, and the projected population for 2019 was estimated using Census 2011. ¹The total number of children <5 years is 891,280.

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

Map 5 & 6. Number of underweight children (<5y) & women (15-49y), 2019-2021

Map 5. Underweight children



Number of underweight children¹ = 187,257

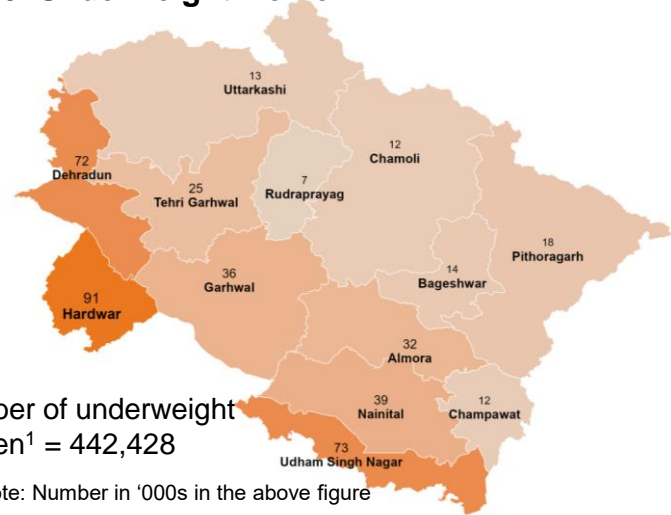
Note: Number in '000s in the above figure

Highest burden districts

1	Hardwar	50,927
2	Udham Singh Nagar	33,105
3	Dehradun	25,346
4	Nainital	12,204
5	Almora	12,159

No. of districts with public health concern²: 7 of 13

Map 6. Underweight women



Number of underweight women¹ = 442,428

Note: Number in '000s in the above figure

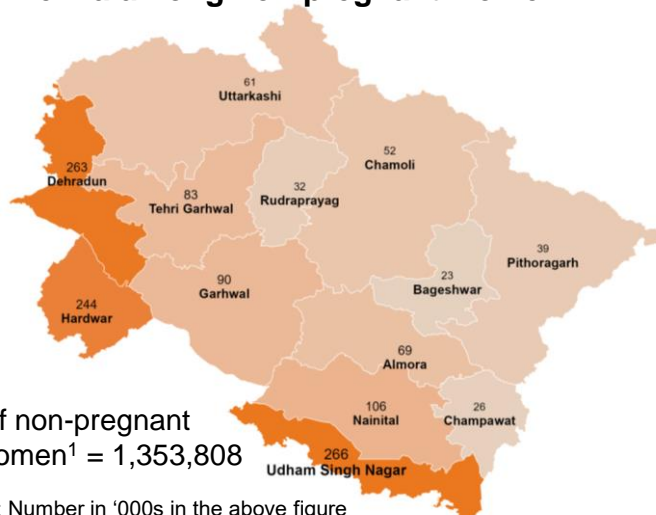
Highest burden districts

1	Hardwar	90,830
2	Udham Singh Nagar	73,056
3	Dehradun	71,688
4	Nainital	39,019
5	Garhwal	35,610

No. of districts with public health concern²: 11 of 13

Map 7 & 8. Number of anemic women (15-49y), 2019-2021

Map 7. Anemia among non-pregnant women



Number of non-pregnant anemic women¹ = 1,353,808

Note: Number in '000s in the above figure

Highest burden districts

1	Udham Singh Nagar	265,758
2	Dehradun	262,638
3	Hardwar	243,868
4	Nainital	106,428
5	Garhwal	90,253

No. of districts with public health concern²: 8 of 13

Map 8. Anemia among pregnant women³



Number of pregnant anemic women¹ = 78,566

Note: Number in '000s in the above figure

Highest burden districts

1	Hardwar	33,137
2	Udham Singh Nagar	19,990
3	Nainital	5,835
4	Tehri Garhwal	5,477
5	Uttarkashi	3,873

No. of districts with public health concern²: 5 of 11

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 (2019-2021) district factsheets, and the projected population for 2019 was estimated using Census 2011. ¹The total number of children <5 years is 891,280, pregnant women 15-49 years is 223,639, and non-pregnant women 15-49 years is 2,963,779. ²Public 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). Note: Gray area in map indicates districts for which data is not available.

Figure 2. Trends in overweight/obesity & NCDs²
2005-2006, 2015-2016, 2019-2021

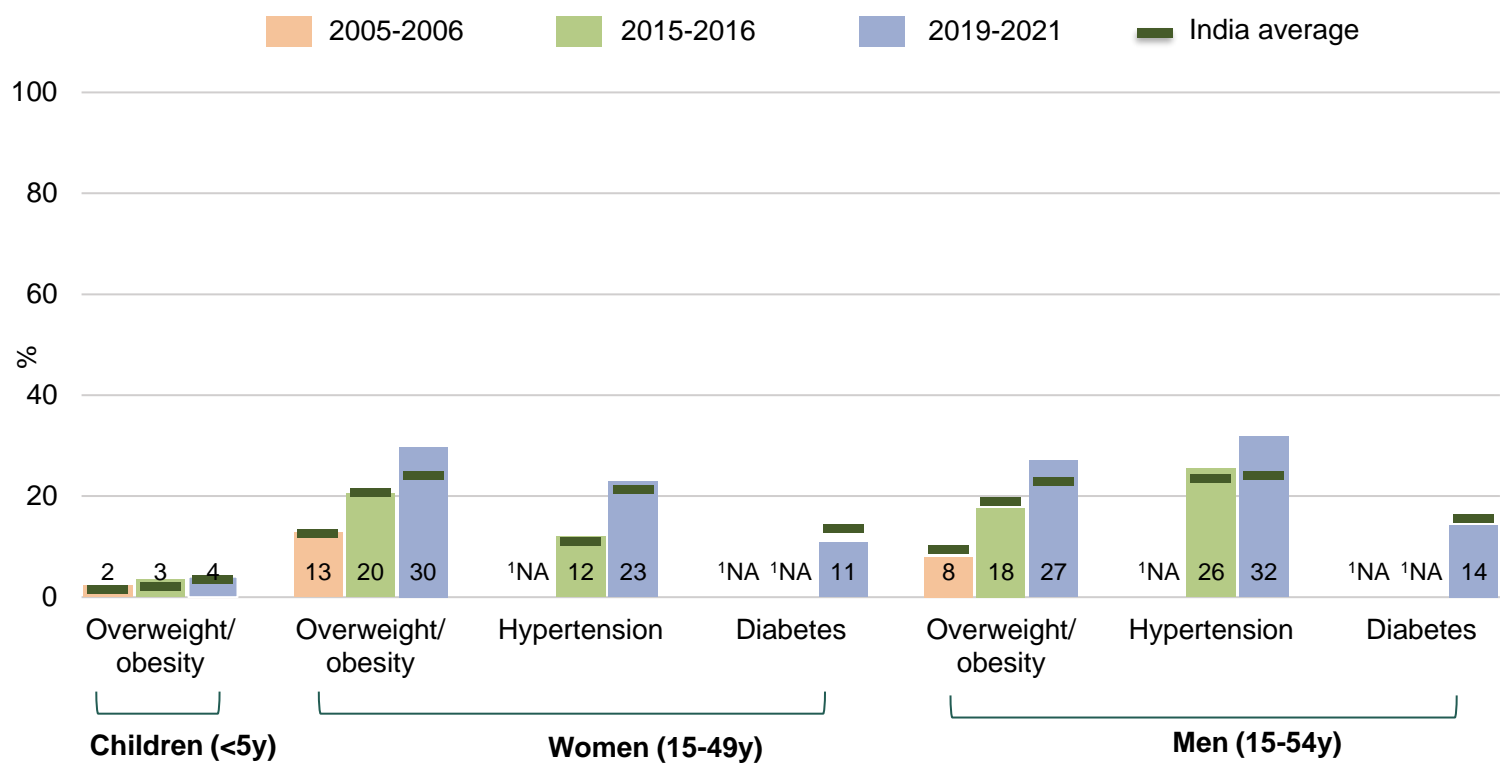


Table 1. Overweight/obesity & NCDs² at district-level
2015-2016, 2019-2021

Category	Outcomes	Worst performing districts (pp)	Best performing districts (pp)	Highest burden districts (thousands) ⁴	No of districts with public health concern ⁵ (total=13)
		<i>Difference between (2019-2021) & (2015-2016)³</i>	<i>Difference between (2019-2021) & (2015-2016)³</i>	2019-2021	2019-2021
Children <5 years	Overweight/obesity	Chamoli: +5.3 Nainital: +2.6	Pithoragarh: -2.8 Uttarkashi: -1.7	Hardwar: 7 Nainital: 6	0
	Overweight/obesity	T. Garhwal ⁶ : +15.6 Dehradun: +15.4	<i>Not Applicable⁷</i>	Dehradun: 218 U.S.N. ⁶ : 184	10
Women (15-49 years)	Hypertension	T. Garhwal ⁶ : +13.1 Garhwal: 12.2	<i>Not Applicable⁷</i>	Hardwar: 149 Dehradun: 130	8
	Diabetes	<i>Not Available¹</i>		Dehradun: 76 U.S.N. ⁶ : 74	0
	Overweight/obesity	<i>Not Available¹</i>			
Men (15-54 years)	Hypertension	T. Garhwal ⁶ : +21.0 Bageshwar: +12.9	<i>Not Applicable⁷</i>	Hardwar: 215 Dehradun: 191	13
	Diabetes	<i>Not Available¹</i>		Dehradun: 107 U.S.N. ⁶ : 100	0

pp: percentage points.

Source: NFHS-3 (2005-2006) national report, NFHS-4 (2015-16) national report and data [IFPRI estimates], and NFHS-5 (2019-2021) national and state factsheets. ¹Indicates unavailability of data for a particular indicator in the specified NFHS round. Diabetes data for NFHS-4 are not included in the NFHS-5 factsheet because definition of diabetes is not comparable between NFHS-4 and 5.

²NCDs : non-communicable diseases.

³The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021.

⁴Burden: 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 (2019-2021) district factsheets, and the projected population for 2019 was estimated using Census 2011. ⁵Public health concern is defined as prevalence $\geq 15\%$ for overweight/obesity (children), $\geq 20\%$ for overweight/obesity (women and men), $\geq 20\%$ hypertension (women and men), and $\geq 20\%$ diabetes (women and men) (WHO 2011).

⁶District codes: T. Garhwal: Tehri Garhwal U.S.N.: Udhm Singh Nagar. ⁷Prevalence did not decrease in any district.

Figure 3. Trends in immediate determinants (%)
2005-2006, 2015-2016, 2019-2021

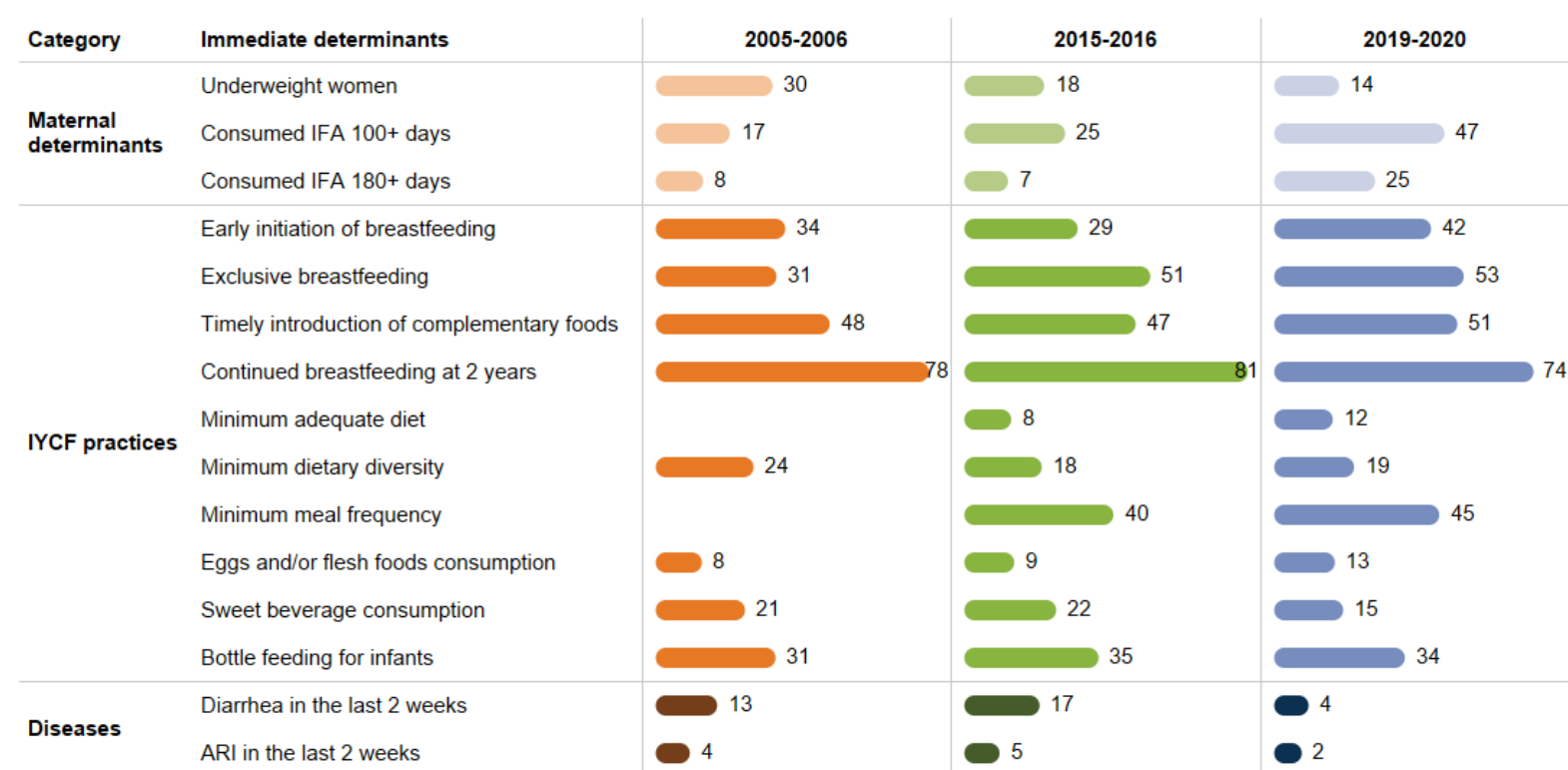


Table 2. Immediate determinants at district-level
2015-2016, 2019-2021

Category	Immediate determinants	Worst performing districts (pp)	Best performing districts (pp)	Top coverage districts (%) ³
		<i>Difference between (2019-2021) & (2015-2016)²</i>	<i>Difference between (2019-2021) & (2015-2016)²</i>	<i>2019-2021</i>
Maternal determinants	Underweight women	<i>Not Applicable⁵</i>	Almora: -9.2 Bageshwar: -7.7	Rudraprayag: 8.8 Chamoli: 9.6
	Consumed IFA 100+ days	<i>Not Applicable⁵</i>	T. Garhwal ⁴ : +33.2 Champawat: +30.5	Dehradun: 57.7 Champawat: 57.7
IYCF practices	Early initiation of breastfeeding	Nainital: -14.9 Rudraprayag: -2.8	Uttarkashi: +37.1 Dehradun: +31.4	Uttarkashi: 65.3 Chamoli: 65.0
	Exclusive breastfeeding	Uttarkashi: -16.4 Dehradun: -13.6	T. Garhwal ⁴ : +20.8 Almora: +18.9	Garhwal: 75.2 T. Garhwal ⁴ : 64.6
	Timely introduction of complementary foods	<i>Not Available¹</i>		
	Minimum adequate diet	T. Garhwal ⁴ : -5.5 Bageshwar: -4.3	Hardwar: +11.8 Garhwal: +8.3	Nainital: 19.1 Pithoragarh: 17.4
Diseases	Diarrhea in the last 2 weeks	<i>Not Applicable⁵</i>	Uttarkashi: -17.1 Bageshwar: -17.0	Dehradun: 1.7 T. Garhwal ⁴ : 3.0
	ARI in the last 2 weeks	T. Garhwal ⁴ : +1.2 Almora: +0.6	Champawat: -7.8 Bageshwar: -4.7	Champawat: 0.0 Pithoragarh: 0.5

pp: percentage points.

Source: NFHS-3 (2005-2006) national and state reports and data [IFPRI estimates], NFHS-4 (2015-2016) state report and data [IFPRI estimates], and NFHS-5 (2019-21) national and state reports, factsheets, and data [IFPRI estimates].

Note: Definitions of IYCF indicators are based on WHO guidelines.

¹Indicates unavailability of data for a particular indicator in the specified NFHS round.

²The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021. All 13 districts are comparable between 2015-2016 and 2019-2021 in Uttarakhand.

³For all indicators, top coverage districts refer to the districts with the highest prevalence in immediate determinants, except for underweight women, diarrhea in the last 2 weeks, and ARI in the last 2 weeks, for which it refers to the districts with the lowest prevalence in coverage.

⁴District codes: T. Garhwal: Tehri Garhwal.

⁵Prevalence did not increase or decrease in any district.

Figure 4. Trends in underlying determinants (%)
2005-2006, 2015-2016, 2019-2021

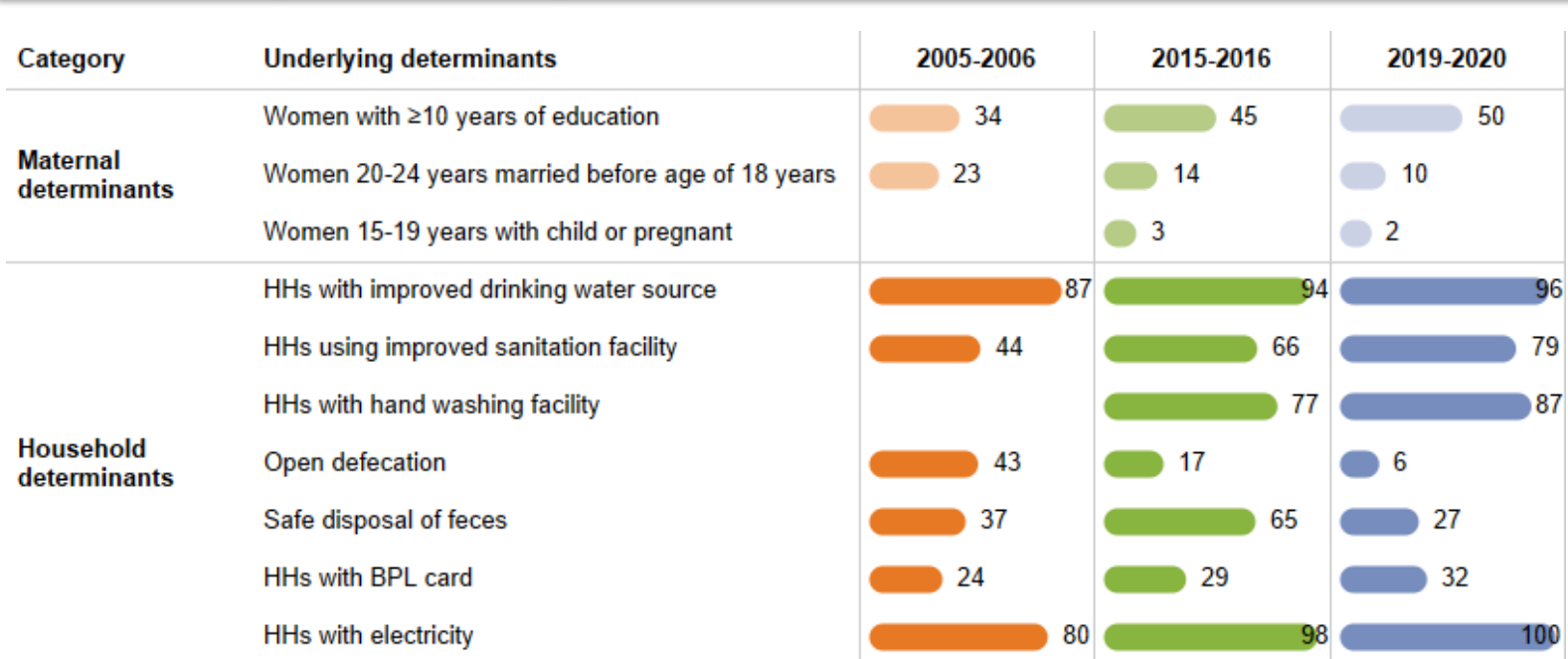


Table 3. Underlying determinants at district-level
2015-2016, 2019-2021

Category	Underlying determinants	Worst performing districts (pp)	Best performing districts (pp)	Top coverage districts (%) ²
		<i>Difference between (2019-2021) & (2015-2016)¹</i>	<i>Difference between (2019-2021) & (2015-2016)¹</i>	2019-2021
Maternal determinants	Women with ≥10 years education	T. Garhwal ⁴ : -3.0	Pithoragarh: +16.8 Uttarkashi: +13.4	Dehradun: 62.6 Chamoli: 59.0
	Women 20-24 years married before age of 18 years	Garhwal: +2.4	Pithoragarh: -10.4 Chamoli: -8.9	Almora: 1.5 Chamoli: 3.4
	Women 15-19 years with child or pregnant	T. Garhwal ⁴ : 1.7 Chamoli: 1.7	Pithoragarh: -3.1 Garhwal: -2.5	Dehradun: 0.4 Garhwal: 1.3
Household determinants	HHs with improved drinking water source	Garhwal: -4.2 Nainital: -3.8	Uttarkashi: +23.1 Almora: +10.7	U.S.N. ⁴ : 99.9 Hardwar: 99.6
	HHs using improved sanitation facility	<i>Not Applicable³</i>	Uttarkashi: +28.6 Almora: +23.2	Almora: 89.2 Bageshwar: 88.5
	HHs with electricity	<i>Not Applicable³</i>	Champawat: +6.6 Uttarkashi: +6.1	T. Garhwal ⁴ : 99.9 Almora: 99.9

pp: percentage points.

Source: NFHS-3 (2005-2006) national and state reports and data [IFPRI estimates], NFHS-4 (2015-2016) national and state reports and data [IFPRI estimates], and NFHS-5 (2019-2021) state and district factsheets, state report, and data [IFPRI estimates].

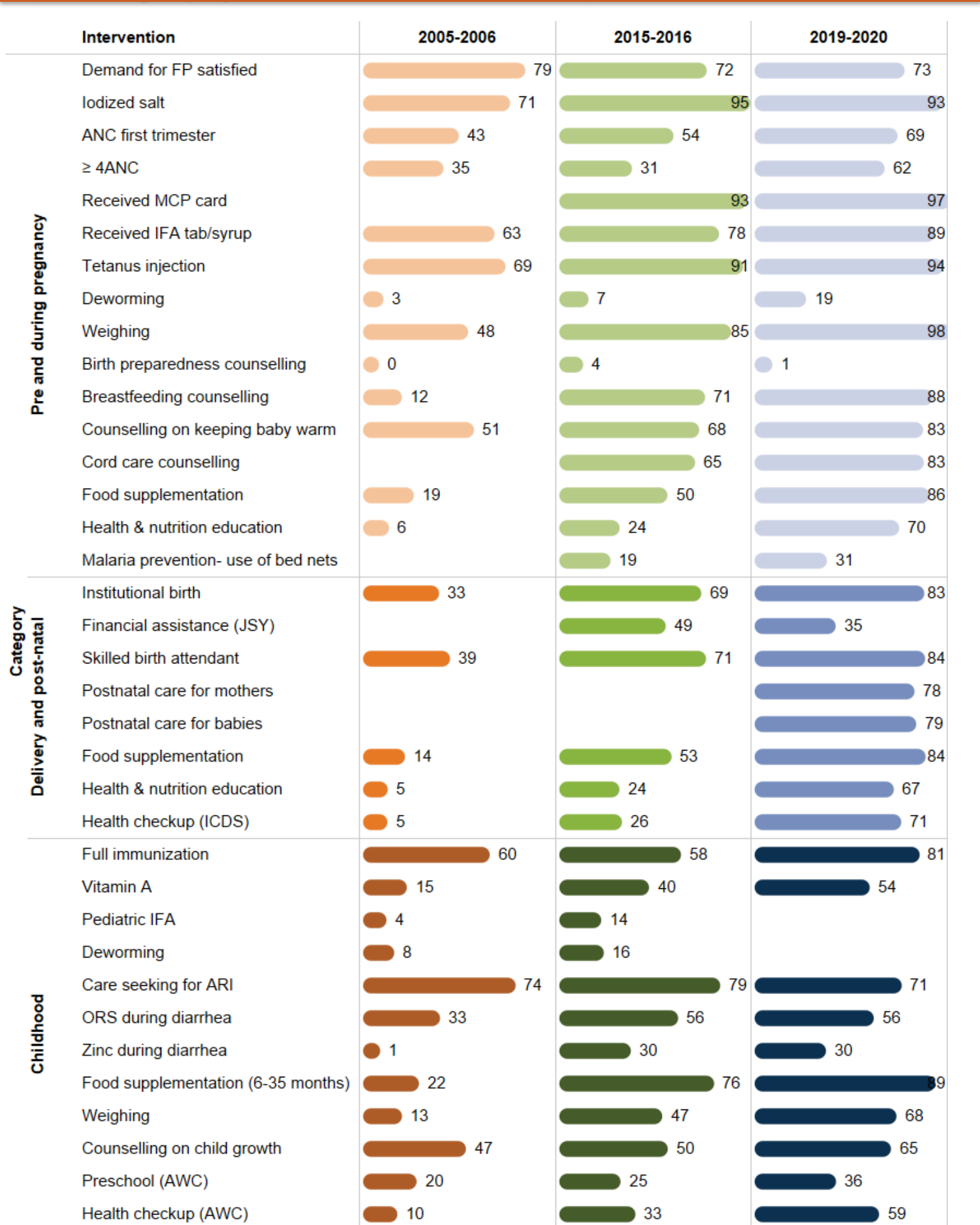
¹The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021.

²For all indicators, top coverage districts refer to the districts with the highest prevalence in underlying determinants, except for women 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.

³Prevalence did not decrease in any of the districts.

⁴District codes: T. Garhwal: Tehri Garhwal, U.S.N.: Udham Singh Nagar.

Figure 5. Trends in coverage of interventions across the first 1,000 days (%), 2005-2006, 2015-2016, 2019-2021



Source: NFHS-3 (2005-2006) national and state reports and data [IFPRI estimates], NFHS-4 (2015-2016) national and state reports and data [IFPRI estimates] and NFHS-5 (2019-2021) state factsheet, state and national report, and data [IFPRI estimates].
 Note 1: Refer to district dashboard for the inter-district variability in the coverage of interventions.

Intervention coverage at district level, 2019-2021



District name	Pre-pregnancy		Pregnancy												Delivery & postnatal										Early childhood											
	Demand for FP satisfied	Iodized salt	ANC first trimester	≥4 ANC	Received MCP card	Received IFA tab/syrup	Tetanus injection	Deworming	Weighing	Birth preparedness counselling	Breastfeeding counselling	Counseling on keeping baby warm	Cord care counselling	Food supplementation	Health & nutrition education	Malaria prevention- use of bed nets	Institutional birth	Financial assistance (ISY)	Skilled birth attendant	Postnatal care for mothers	Postnatal care for babies	Food supplementation	Health & nutrition education	Health checkup	Health checkup	Full immunization	Vitamin A	Paediatric IFA	Deworming	Care seeking for ARI	ORS during diarrhea	Zinc during diarrhea	Food supplementation (6-35 months)	Weighing	Counseling on child growth	Preschool at AWC
Uttarakhand	72.6	93.2	68.8	61.8	97.1	89.1	93.6	19.3	97.6	1.0	87.9	82.6	83.0	86.0	69.7	30.5	83.2	35.3	83.7	78.0	78.9	84.0	66.8	70.8	80.8	53.7	11.1	16.4	71.0	55.9	30.1	89.2	68.2	65.2	35.5	58.8
Almora	82.9	88.1	52.3	44.3	99.4	95.5	87.7	21.0	99.3	0.0	94.5	87.1	91.0	95.7	83.4	17.7	80.1	56.1	85.4	78.1	79.6	92.0	80.2	80.4	85.1	51.6	8.4	22.1	55.2		97.2	65.9	68.5	26.0	59.4	
Bageshwar	76.2	98.6	63.8	67.9	99.4	93.5	94.8	19.3	99.4	0.8	94.5	91.9	92.0	95.9	82.7	18.2	82.0	61.6	85.0	78.1	79.8	92.3	83.2	88.0	86.9	37.0	7.5	20.5			96.1	75.1	76.0	31.3	73.5	
Chamoli	77.2	93.8	58.6	52.2	100.0	93.2	94.6	35.4	98.3	2.6	92.2	86.8	92.4	87.7	74.0	12.0	73.9	52.9	75.3	72.1	67.8	88.0	78.0	77.7	85.0	49.9	14.2	23.5			91.9	76.3	67.6	59.8	77.1	
Champawat	74.8	97.1	72.3	62.0	100.0	94.6	96.6	22.8	98.7	1.9	94.3	87.4	94.5	93.8	79.6	26.2	79.8	35.8	80.7	80.8	80.5	87.5	77.6	80.2	91.9	56.9	14.2	25.8			93.7	77.1	77.9	57.9	72.4	
Dehradun	72.6	92.3	83.5	75.3	98.0	92.3	98.4	18.8	98.7	0.4	83.7	77.9	75.5	71.2	55.6	11.6	91.7	20.3	92.7	82.4	84.2	70.7	52.6	59.2	76.0	61.0	10.0	18.0			75.7	56.4	51.7	40.3	55.6	
Garhwal	72.8	92.3	49.0	39.6	96.8	84.4	90.5	9.4	97.0	0.0	73.0	75.4	68.0	83.8	57.5	22.1	76.0	43.9	76.9	64.0	70.7	78.5	54.7	59.6	76.0	48.3	8.3	9.7			85.7	59.9	52.2	49.4	56.4	
Hardwar	67.5	89.8	57.4	48.5	93.2	83.7	89.7	17.5	93.6	0.9	85.3	79.7	77.6	80.8	63.4	32.1	79.8	19.2	83.2	74.2	76.6	78.4	57.7	61.9	74.1	50.8	11.6	12.2	77.8			87.7	63.9	61.2	32.8	58.0
Nainital	79.4	97.4	70.0	59.7	97.8	92.3	88.8	13.0	98.6	0.5	83.1	76.3	75.9	91.1	72.4	27.7	81.2	51.4	83.9	75.9	76.3	83.3	65.7	67.7	74.1	45.8	7.6	13.0	62.0			87.1	61.5	65.5	30.4	53.4
Pithoragarh	77.2	97.7	68.7	58.7	97.4	94.4	94.0	24.5	99.5	0.9	91.5	87.5	89.2	92.6	78.7	10.5	84.9	53.1	83.2	82.0	82.7	90.7	78.2	79.7	96.0	69.6	20.9	24.7			94.4	77.2	69.9	50.4	77.5	
Rudrapur	72.7	91.7	74.2	76.5	99.7	93.7	94.0	16.6	99.0	3.9	93.0	90.2	91.8	96.2	80.8	7.7	86.6	55.6	85.8	83.6	82.2	92.0	76.7	81.4	91.4	71.9	12.8	24.3			96.3	81.7	66.9	34.9	81.3	
Tehri Garhwal	64.6	92.8	62.3	48.9	93.8	89.1	94.1	21.3	98.6	0.4	88.5	84.0	86.8	90.1	72.1	12.6	82.2	48.7	77.6	78.5	80.4	90.1	71.4	74.0	83.0	59.5	10.3	16.4	79.2			90.4	73.0	57.0	60.4	71.7
Udham Singh Nagar	69.7	95.9	77.3	75.9	98.5	86.6	96.9	22.8	98.1	1.9	92.1	87.9	91.1	93.5	81.4	66.8	85.1	35.5	81.6	82.0	80.8	88.0	75.6	78.0	83.2	52.1	11.2	15.4	74.6			96.5	80.4	74.0	43.2	78.7
Uttarkashi	73.9	87.2	77.1	66.8	99.6	93.3	95.3	12.8	96.9	0.2	85.4	81.2	84.8	93.5	67.5	6.8	85.9	51.8	84.5	72.0	72.4	95.2	61.6	77.7	81.8	55.6	13.0	25.7			90.7	69.4	70.8	53.1	69.3	

Source: NFHS-5 district factsheets and state reports (2019-21) and data [IPRI estimates].

Note 1: In NFHS-5 district factsheets, estimate for indicators with sample size <25 is not reported.

Table 4. Intervention coverage at district-level 2015-2016, 2019-2021

Category	Interventions	Worst performing districts (pp)	Best performing districts (pp)	Top coverage districts (%)
		<i>Difference between (2019-2021) & (2015-2016)²</i>	<i>Difference between (2019-2021) & (2015-2016)²</i>	<i>2019-2021</i>
Pregnancy	ANC first trimester	Garhwal: -12.4 Almora: -5.3	Uttarkashi: +33.3 U.S.N. ⁴ : +30.8	Dehradun: 83.5 U.S.N. ⁴ : 77.3
	≥4 ANC visits	<i>Not Applicable³</i>	Rudraprayag: +59.3 U.S.N. ⁴ : +49.4	Rudraprayag: 76.5 U.S.N. ⁴ : 75.9
	Received MCP Card	T. Garhwal ⁴ : -4.3 Almora: -0.1	U.S.N. ⁴ : +9.3 Uttarkashi: +7.1	Champawat: 100.0 Chamoli: 100.0
	Tetanus injection	Garhwal: -5.0 Almora: -3.7	U.S.N. ⁴ : +10.0 Chamoli: +3.8	Dehradun: 98.4 U.S.N. ⁴ : 96.9
Delivery and post-natal	Institutional birth	<i>Not Applicable³</i>	Bageshwar: +26.1 Uttarkashi: +20.7	Dehradun: 91.7 Rudraprayag: 86.6
	Skilled birth attendant	<i>Not Applicable³</i>	Bageshwar: +22.6 Hardwar: +19.6	Dehradun: 92.7 Rudraprayag: 85.8
	Postnatal care for mothers	<i>Not Applicable⁵</i>	<i>Not Applicable⁵</i>	Rudraprayag: 83.6 Dehradun: 82.4
	Postnatal care for babies	<i>Not Applicable⁵</i>	<i>Not Applicable⁵</i>	Dehradun: 84.2 Pithoragarh: 82.7
Early childhood	Full immunization	<i>Not Applicable³</i>	U.S.N. ⁴ : +36.2 T. Garhwal ⁴ : +31.9	Pithoragarh: 96.0 Champawat: 91.9
	Vitamin A supplementation	Almora: -10.7 Nainital: -10.0	T. Garhwal ⁴ : +28.3 Uttarkashi: +27.9	Rudraprayag: 71.9 Pithoragarh: 69.6
	Care seeking for ARI	Nainital: -17.6 Hardwar: -8.8	T. Garhwal ⁴ : +0.4	T. Garhwal ⁴ : 79.2 Hardwar: 77.8
	ORS treatment during diarrhea	<i>Not Available¹</i>		
	Zinc treatment during diarrhea	<i>Not Available¹</i>		

Key takeaways

Children: Stunting and underweight prevalence declined by 10 percentage points (pp) and 11pp between 2006 and 2016 and by 7pp and 6pp between 2016 and 2021, respectively. Wasting remained stable between 2006 and 2016 before declining by 6pp between 2016 and 2021. Anemia slightly declined by 1pp between 2006 and 2016 and between 2016 and 2021. Overweight/obesity increased by 1pp between 2006 and 2016 and between 2016 and 2021.

Women: Underweight declined by 12pp between 2006 and 2016 and by 4pp between 2016 and 2021. Anemia among non-pregnant and pregnant women declined by 10pp and 5pp, respectively, between 2006 and 2016; anemia among non-pregnant women continued to decline by 3pp but remained stable among pregnant women between 2016 and 2021. Overweight/obesity prevalence increased by 7pp between 2006 and 2016 and by 10pp between 2016 and 2021.

Men: Overweight/obesity increased by 9-10pp between 2006 and 2016 and between 2016 and 2021.

Attention is needed to improve (%s in 2021):

- **Outcomes:** Stunting (27%), anemia in children (59%); anemia (42-46%) and overweight/obesity (30%) in women
- **Immediate determinants:** 100+ IFA (47%); minimum adequate diet (12%), minimum dietary diversity (19%)
- **Underlying determinants:** Women with ≥10 years education (50%)
- **Coverage of interventions:** Deworming during pregnancy (19%); financial assistance-JSY (35%); vitamin A supplementation for child (54%); zinc during diarrhea for child (30%); preschool-AWC (36%)

pp: percentage points. Source: NFHS-3 state and national reports and data [IFPRI estimates], NFHS-4 (2015-2016) state and national reports and data [IFPRI estimates], and NFHS-5 (2019-2021) state and national reports/factsheets and data [IFPRI estimates]. Note: Interventions' coverage are based on the last child data. ¹Indicates unavailability of data for a particular indicator in the specified NFHS round. ²The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021. ³Prevalence did not decrease in any of the districts. ⁴District codes: T.Garhwal: Tehri Garhwal, U.S.N.: Udham Singh Nagar. ⁵Indicators postnatal care for women and babies are not comparable between NFHS-4 and 5.

Indicator definition

Nutrition outcomes	Definition
Low birth weight^{3,5}	% live births in 5 years (y) preceding the survey with a reported birth weight <2.5 kilograms (kg), based on either a written record or the mother's recall
Stunting	% children 0-59 months (m) whose height-for-age z score < -2 standard deviations (SD)
Wasting	% children 0-59 m whose weight-for-height z score < -2SD
Severe wasting	% children 0-59 m whose weight-for-height z score < -3SD
Underweight children	% children 0-59 m whose weight-for-age z score < -2SD
Anemia among children	% children 6-59 m whose haemoglobin (Hb) <11.0 g/dl
Underweight women	% women 15-49 y whose Body Mass Index (BMI) <18.5 kg/m ² ; sample excluded pregnant women and women with a birth in the preceding 2 m
Anemia among non-pregnant women¹	% non-pregnant women 15-49 y whose Hb <12.0 g/dl
Anemia among pregnant women¹	% pregnant women 15-49 y whose Hb <11.0 g/dl
Overweight/obesity – children	% children 0-59 m whose weight-for-height z score > 2SD
Overweight/obesity – women	% women 15-49 y whose BMI ≥25.0 kg/m ² ; sample excluded pregnant women and women with a birth in the preceding 2 m
Overweight/obesity – men	% men 15-49 y whose BMI ≥25.0 kg/m ²
Hypertension among women^{2,3,10}	% women 15-49 y with elevated blood pressure (systolic ≥140 mm Hg or diastolic ≥90 mm Hg) or are currently taking medication to control blood pressure
Hypertension among men^{2,3,10}	% men 15-54 y with elevated blood pressure (systolic ≥140 mm Hg or diastolic ≥90 mm Hg) or are currently taking medication to control blood pressure
Diabetes among women¹⁰	% women 15-49 y with high (>140 mg/dl) or very high (>160 mg/dl) blood sugar or are currently taking medication to control blood sugar
Diabetes among men¹⁰	% men 15-54 y with high (>140 mg/dl) or very high (>160 mg/dl) blood sugar or are currently taking medication to control blood sugar
Immediate determinants	Definition
Underweight women	% women 15-49 y whose BMI <18.5 kg/m ² ; sample excluded pregnant women and women with a birth in the preceding 2 m
Consumed IFA 100+ days¹	% women 15-49 y who consumed iron folic acid (IFA) for 100 days or more during pregnancy for the most recent live birth in the 5 y preceding the survey
Consumed IFA 180+ days¹	% women 15-49 y who consumed IFA for 180 days or more during pregnancy for the most recent live birth in the 5 y preceding the survey
Early initiation of breastfeeding^{1,2,3,8,9}	% youngest children <2 y who started breastfeeding <1 hour of birth
Exclusive breastfeeding	% youngest children 0-5 m who were fed exclusively with breastmilk the previous day
Timely introduction of complementary foods	% youngest children 6-8 m living with their mother who received solid or semi-solid food and breastmilk
Continued breastfeeding at 2 years^{1,3,4,5,6}	% youngest children 12-23 m living with their mother who were fed breastmilk during the previous day
Minimum adequate diet^{2,3,4,5,9,10}	% youngest children 6-23 m who consumed a minimum acceptable diet during the previous day
Minimum dietary diversity^{1,2,3,4,5,9}	% youngest children 6-23 m who consumed foods and beverages from at least 5 out of 8 defined food groups during the previous day
Minimum meal frequency^{2,3,4,5,9,10}	% youngest children 6-23 m who consumed solid, semi-solid or soft foods (but also including milk feeds for non-breastfed children) at least the minimum number of times during the previous day
Eggs and/or flesh foods consumption^{1,2,3,4,5,9}	% youngest children 6-23 m who consumed egg and/or flesh food during the previous day
Sweet beverage consumption^{1,2,3,4,5,9}	% youngest children 6-23 m who consumed a sweet beverage during the previous day
Bottle feeding for infants^{1,2,3,4,5,9}	% youngest children 0-23 m who were fed from a bottle with a nipple during the previous day
Diarrhea in the last 2 weeks	% children <5 y who had diarrhea in the 2 weeks preceding the survey
ARI in the last 2 weeks	% children <5 y who had symptoms of acute respiratory infection (ARI) in the 2 weeks preceding the survey
Underlying determinants	Definition
Women with ≥10 years of education	% women 15-49 y with ≥10 y of schooling
Women 20-24 years married before age of 18 years¹	% women 20-24 y who were married when <18 y
Women 15-19 years with child or pregnant¹⁰	% women 15-19 y who were mothers or pregnant at the time of the survey
HHS with improved drinking water source	% population living in households whose source of drinking water is piped into dwelling/yard/plot, piped to neighbour, public tap/standpipe, tube well or borehole, protected dug well, protected spring, rainwater, tanker truck, cart with small tank, bottled water, or community RO plant
HHS using improved sanitation facility	% population living in households using flush to pipe sewer system, flush to septic tank, flush to pit latrine, ventilated improved pit (VIP)/biogas latrine, pit latrine with slab or twin pit/composting toilet, which is not shared with any other household
HHS with hand washing facility^{2,4,10}	% households where a place for washing hands with water and soap was present
Open defecation^{6,7}	% households that have no toilet facility/defecate in open space or field
Safe disposal of feces^{3,4,5}	% youngest children <5 y living with their mother whose stools were disposed of safely
HHS with BPL card^{3,5,6,7}	% households possessing a BPL card
HHS with electricity	% population living in households with electricity

Note: Unless specified, state and district estimates taken from NFHS-3 national/state report for NFHS-3, NFHS-4 national/state report or NFHS-5 factsheet for NFHS-4, and NFHS-5 national/state report or factsheet for NFHS-5.

¹Indicator estimated using NFHS-3 unit-level data (state level)

²Indicator estimated using NFHS-4 unit-level data (state level)

³Indicator estimated using NFHS-4 unit-level data (district level)

⁴Indicator estimated using NFHS-5 unit-level data state level

⁵Indicator estimated using NFHS-5 unit-level data (district level)

⁶Indicator estimated using NFHS-4 unit-level data for union territories as their summary reports are not available (state level)

⁷Indicator estimated using NFHS-5 unit-level data for union territories as their summary reports are not available (state level)

⁸Indicator estimated using NFHS-5 unit-level data for union territories as their summary reports are not available (district level)

⁹Indicator constructed following WHO guidelines

¹⁰Indicator not available in NFHS-3 and/or 4 tool or not comparable between NFHS-3/4 and 5

Indicator definition

Interventions	Definition
Demand for FP satisfied^{1,3,5}	% currently married women 15-49 years (y) with demand for family planning (FP) satisfied by modern methods
Iodized salt	% households using iodized salt
ANC first trimester	% women 15-49 y who received antenatal care (ANC) during the first trimester for the most recent live birth in the 5 y preceding the survey
≥ 4ANC¹	% women 15-49 y who received ≥4 ANC visits for the most recent live birth in the 5 y preceding the survey
Received MCP card¹⁰	% women 15-49 y who received a mother and child protection (MCP) card during pregnancy for the most recent live birth in the 5 y preceding the survey
Received IFA tab/syrup^{3,8}	% women 15-49 y who received IFA (given or purchased) during pregnancy for the most recent live birth in the 5 y preceding the survey
Tetanus injection¹	% women 15-49 y whose most recent live birth in the 5 y preceding the survey was protected against neonatal tetanus
Deworming- pregnancy^{3,8}	% women 15-49 y who took deworming medication during pregnancy for the most recent live birth in the 5 y preceding the survey
Weighing- pregnancy^{3,5,6,7}	% women 15-49 y who were weighed during ANC for the most recent live birth in the 5 y preceding the survey
Birth preparedness counselling^{1,2,3,4,5}	% women 15-49 y with a child 0-60 months (m) who had ≥1 contacts with a community health worker in the 3 m preceding the survey and were advised on birth preparedness
Breastfeeding counselling^{1,3,5,6,7}	% women 15-49 y who met with a community health worker in the last 3 m of pregnancy for the most recent live birth in the 5 y preceding the survey and were advised on breastfeeding
Counselling on keeping baby warm^{1,5,6,7}	% women 15-49 y who met with a community health worker in the last 3 m of pregnancy for the most recent live birth in the 5 y preceding the survey and were advised on keeping the baby warm
Cord care counselling^{5,6,7,10}	% women 15-49 y who met with a community health worker in the last 3 m of pregnancy for the most recent live birth in the 5 y preceding the survey and were advised on cord care
Food supplementation – pregnancy^{3,5}	% women 15-49 y with a child <6 y who received food supplements from ICDS during pregnancy
Health & nutrition education – pregnancy⁵	% women 15-49 y with a child <6 y who received health and nutrition education from ICDS during pregnancy
Malaria prevention- use of bed nets^{2,4,5,10}	% women 15-49 y who slept under a treated bed net during pregnancy of the most recent live birth in the 5 y preceding the survey
Institutional birth	% live births in the 5 y preceding the survey to women 15-49 y delivered in a health facility
Financial assistance (JSY)^{6,7,8,10}	% women 15-49 y who received financial assistance under Janani Suraksha Yojana (JSY) for the most recent live birth that took place in a health facility in the 5 y preceding the survey
Skilled birth attendant	% live births in the 5 y preceding the survey to women 15-49 y that were assisted by a skilled provider
Postnatal care for mothers¹⁰	% women 15-49 y who received postnatal care from a doctor/nurse/LHV/auxiliary nurse midwife (ANM)/midwife/other health personnel <2 days of delivery for the most recent live birth in the 5 y preceding the survey
Postnatal care for babies¹⁰	% most recent live births in the 5 y preceding the survey to women 15-49 y with a postnatal check for the newborn from a doctor/nurse/LHV/ANM/midwife/other health personnel <2 days of delivery
Food supplementation – postnatal^{3,5}	% women 15-49 y with a child <6 y who received food supplements from ICDS during breastfeeding
Health & nutrition education – postnatal^{3,5}	% women 15-49 y with a child <6 y who received health and nutrition education from ICDS during breastfeeding
Health checkup (ICDS)^{3,5}	% women 15-49 y with a child <6 y who received a health check-up from ICDS during breastfeeding
Full immunization	% children 12-23 m fully vaccinated based on information from either vaccination card or mother's recall
Vitamin A – early childhood¹	% children 9-35 m who received a vitamin A dose in the 6 m preceding the survey
Pediatric IFA^{3,4,5,10}	¹¹ % children 6-59 m who were given iron supplements in the 7 days preceding the survey ¹² % children 6-36 m who were given iron supplements in the 7 days preceding the survey
Deworming – early childhood^{3,4,5,10}	¹¹ % children 6-59 m who received deworming medication in the 6 m preceding the survey ¹² % children 6-36 m who received deworming medication in the 6 m preceding the survey
Care seeking for ARI	% children <5 y with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider
ORS during diarrhea	% children <5 y with diarrhea in the 2 weeks preceding the survey who received Oral Rehydration Solutions (ORS)
Zinc during diarrhea	% children <5 y with diarrhea in the 2 weeks preceding the survey who received zinc
Food supplementation (children 6-35 months)^{1,2,3,4,5}	% youngest children 6-35 m who received food supplements from ICDS in the 12 m preceding the survey
Weighing – early childhood^{3,5}	% children <5 y who were weighed at an anganwadi centre (AWC) or ICDS centre in the 12 m preceding the survey
Counselling on child growth^{3,5,10}	% mothers with a child <5 y who received counselling from an ICDS/anganwadi worker or ANM after they were weighed at an AWC in the 12 m preceding the survey
Preschool (AWC)^{3,5}	% children 36-71 m who went for early childhood care/preschool at an AWC in the 12 m preceding the survey
Health checkup (AWC)^{3,5}	% children <6 y who received health checkups from an AWC in the 12 m preceding the survey

Note: Unless specified, state and districts estimates taken from NFHS-3 national/state report for NFHS-3, NFHS-4 national/state report or NFHS-5 factsheet for NFHS-4, and NFHS-5 national/state report or factsheet for NFHS-5.

¹Indicator estimated using NFHS-3 unit-level data (state level)

²Indicator estimated using NFHS-4 unit-level data (state level)

³Indicator estimated using NFHS-4 unit-level data (district level)

⁴Indicator estimated using NFHS-5 unit-level data state level

⁵Indicator estimated using NFHS-5 unit-level data (district level)

⁶Indicator estimated using NFHS-4 unit-level data for union territories as their summary reports are not available (state level)

⁷Indicator estimated using NFHS-5 unit-level data for union territories as their summary reports are not available (state level)

⁸Indicator estimated using NFHS-5 unit-level data for union territories as their summary reports are not available (district level)

⁹Indicator constructed following WHO guidelines

¹⁰Indicator not available in NFHS-3 and/or 4 tool or not comparable between NFHS-3/4 and 5

¹¹Definition as per NFHS-3 and 4 construction

¹²Definition as per NFHS-5 construction

Led by IFPRI 

AUTHORS

Anjali Pant, Research Analyst, IFPRI

S.K. Singh, Professor, IIPS

Rakesh Sarwal, NITI Aayog

Neena Bhatia, Senior Specialist, NITI Aayog

Robert Johnston, Nutrition Specialist UNICEF

William Joe, Assistant Professor, IEG

Esha Sarswat, Communications Specialist, IFPRI

Purnima Menon, Senior Research Fellow, IFPRI

Phuong Hong Nguyen, Senior Research Fellow, IFPRI

SUGGESTED CITATION

Pant, A., S.K. Singh, R. Sarwal, N. Bhatia, R. Johnston, W. Joe, E. Sarswat, P. Menon, and P.H. Nguyen. 2022. *State Nutrition Profile: Uttarakhand*. POSHAN Data Note 88. New Delhi, India: International Food Policy Research Institute.

ACKNOWLEDGEMENTS

Financial support for this Policy 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) for working with the dataset and Julie Ghostlaw (IFPRI) & Abhilasha Vaid (Consultant) for editing and reviewing the Note.

PARTNERS

Institute of Economic Growth (IEG)

International Institute for Population Science (IIPS)

NITI Aayog

UNICEF



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.

CONTACT US

Email: IFPRI-POSHAN@cgiar.org

IFPRI-NEW DELHI INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

NASC Complex, CG Block,
Dev Prakash Shastri Road,
Pusa, New Delhi 110012, India
T+91.11.66166565
F+91.11.66781699

IFPRI-HEADQUARTERS INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

1201 Eye Street, NW,
Washington, DC 20005 USA
T. +1.202.862.5600
F. +1.202.467.4439
Skype: IFPRIhomeoffice
ifpri@cgiar.org
www.ifpri.org

This publication has been prepared by POSHAN. It has not been peer reviewed. Any opinions stated herein are those of the author(s) and do not necessarily reflect the policies of the International Food Policy Research Institute.

Copyright © 2022 International Food Policy Research Institute. All rights reserved. For permission to republish, contact ifpri-copyright@cgiar.org.

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.