POSHAN
Led by IFPRI

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India

Data Note

No. 85 | MARCH 2022

TELANGANA

State Nutrition Profile: Telangana

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 estimates using unit-level data, data from national and state reports from the National Family Health Survey (NFHS)-3 (2005-2006) and NFHS-4 (2015-2016), and data from state factsheets and reports from NFHS-5 (2019-2021). 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 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.
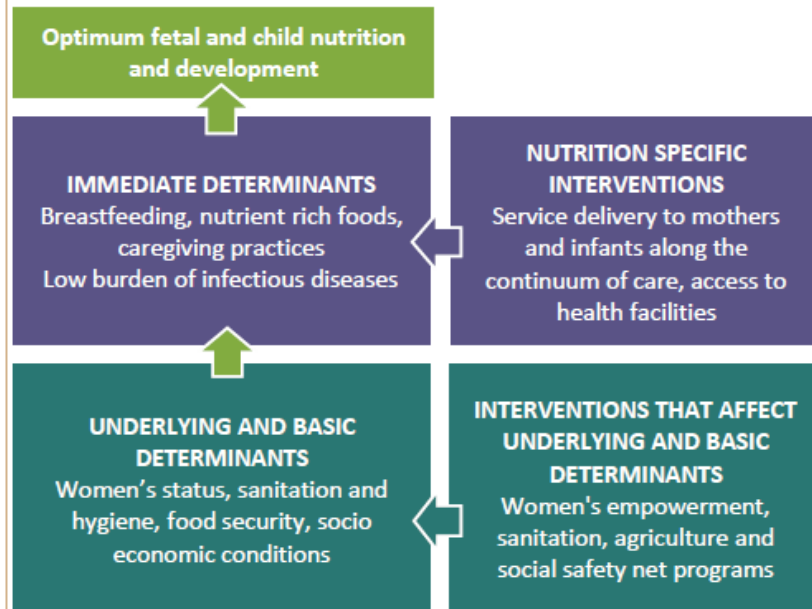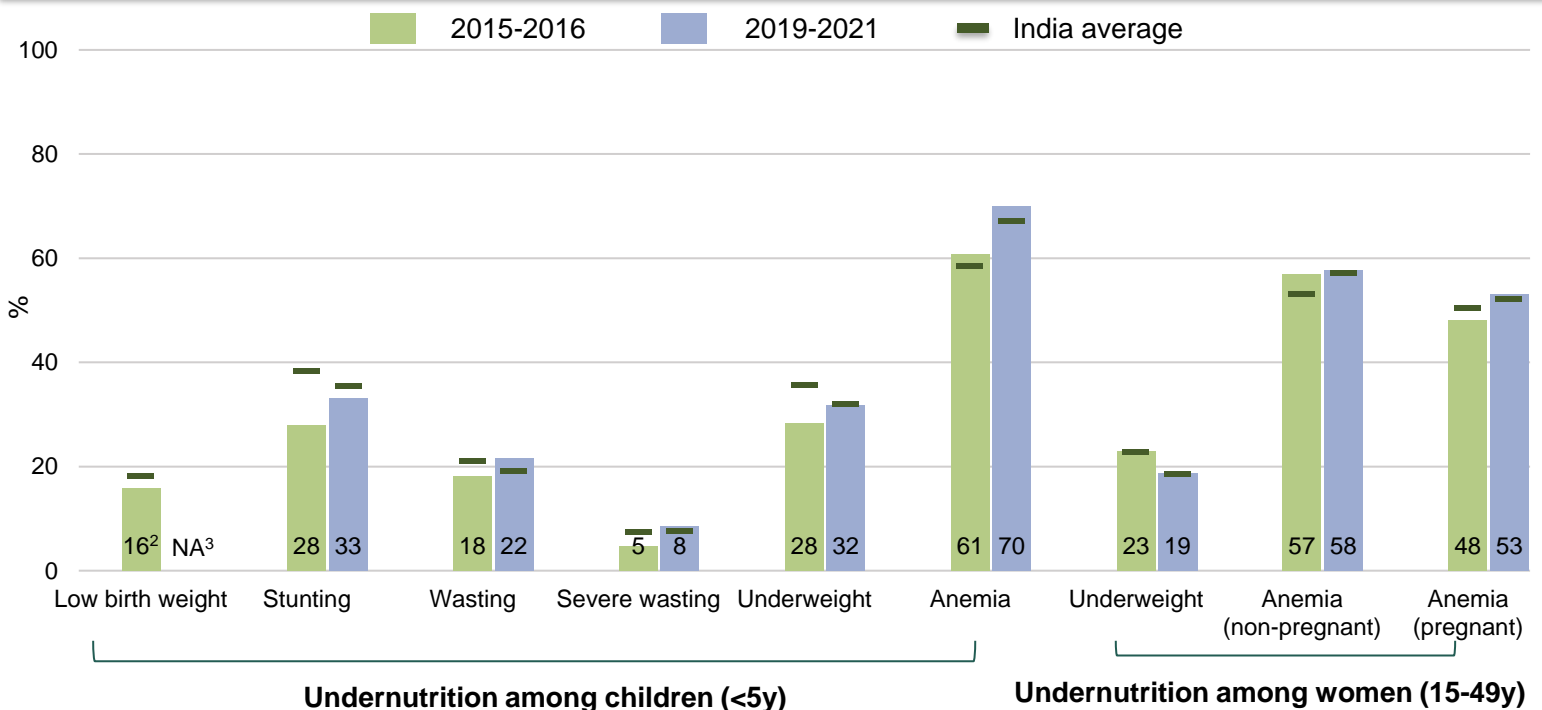
Optimum fetal and child nutrition and development

IMMEDIATE DETERMINANTS
Breastfeeding, nutrient rich foods, caregiving practices
Low burden of infectious diseases

NUTRITION SPECIFIC INTERVENTIONS
Service delivery to mothers and infants along the continuum of care, access to health facilities

UNDERLYING AND BASIC DETERMINANTS
Women's status, sanitation and hygiene, food security, socio economic conditions

INTERVENTIONS THAT AFFECT UNDERLYING AND BASIC DETERMINANTS
Women's empowerment, sanitation, agriculture and social safety net programs

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

Legend: 2015-2016, 2019-2021, India average

Undernutrition among children (<5y):
- Low birth weight: 16[2], NA[3]
- Stunting: 28, 33
- Wasting: 18, 22
- Severe wasting: 5, 8
- Underweight: 28, 32
- Anemia: 61, 70

Undernutrition among women (15-49y):
- Underweight: 23, 19
- Anemia (non-pregnant): 57, 58
- Anemia (pregnant): 48, 53

Source: Data [IFPRI estimates] and NFHS-5 (2019-2021) national and state factsheets.
Note: Telangana state was formed in 2014; therefore, NFHS 3 (2005-06) data are not available for the state.
[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-4, 3.7% of data were missing.
[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, 2019-2021
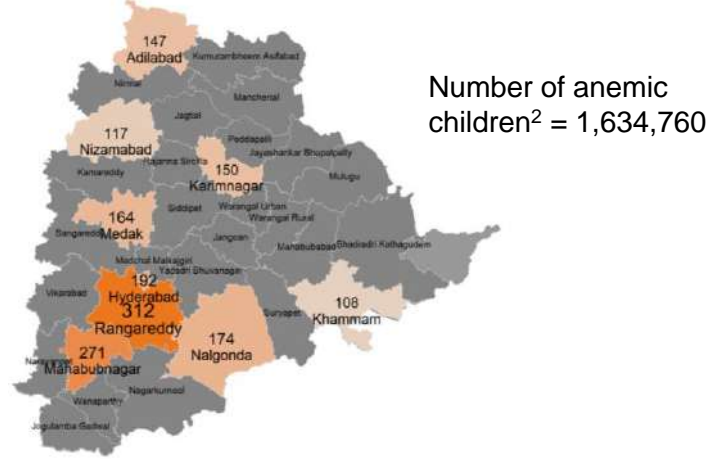
Map 1. Stunting

Number of stunted children[2] = 882,645
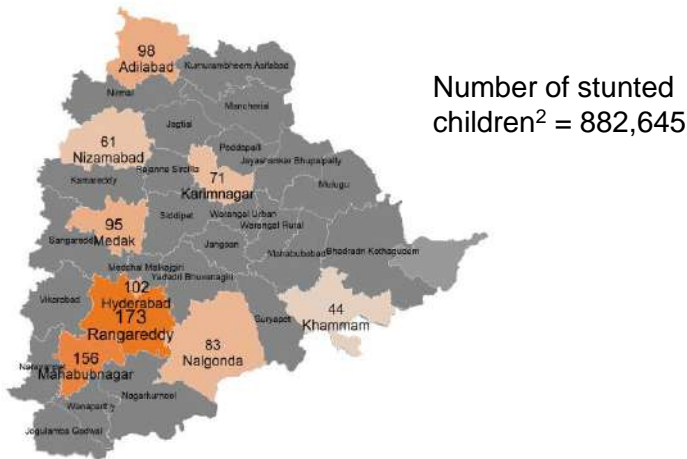
Note: Number in '000s in the above figure

	Highest burden districts	
1	Ranga Reddy	173,073
2	Mahbubnagar	155,653
3	Hyderabad	102,126
4	Adilabad	98,116
5	Medak	94,749

No. of districts with public health concern[1]: 31 of 31

Map 2. Anemia

Number of anemic children[2] = 1,634,760

Note: Number in '000s in the above figure

	Highest burden districts	
1	Ranga Reddy	311,768
2	Mahbubnagar	271,114
3	Hyderabad	191,931
4	Nalgonda	174,275
5	Medak	163,680

No. of districts with public health concern[1]: 31 of 31

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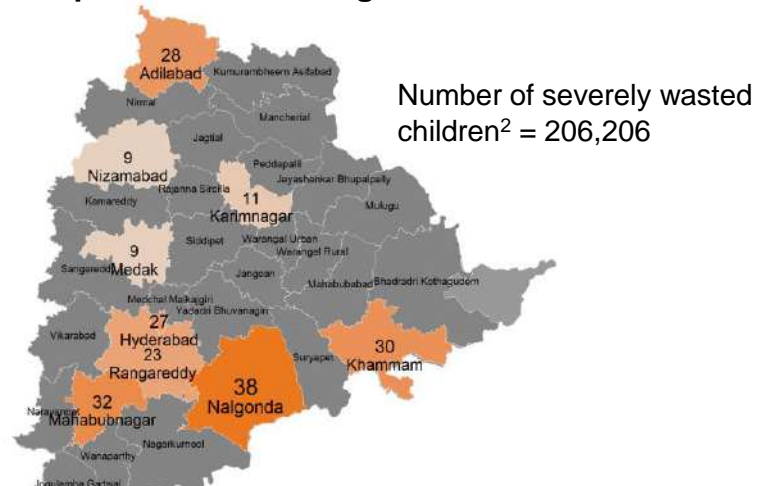
Map 3. Wasting

Number of wasted children[2] = 518,647
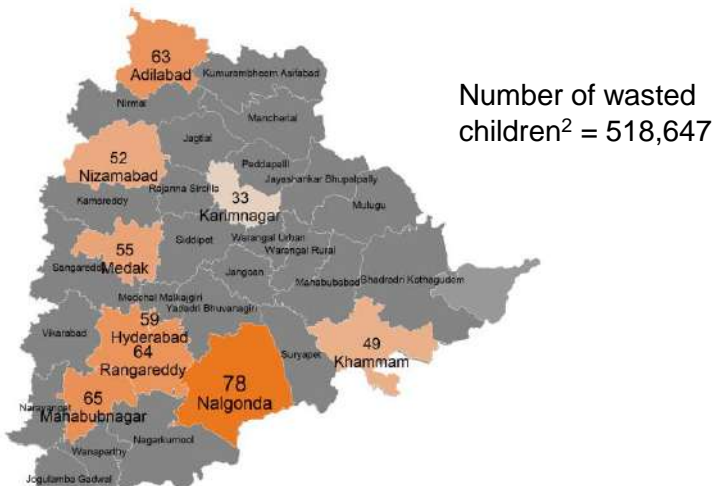
Note: Number in '000s in the above figure

	Highest burden districts	
1	Nalgonda	77,602
2	Mahbubnagar	65,038
3	Ranga Reddy	63,643
4	Adilabad	63,335
5	Hyderabad	59,462

No. of districts with public health concern[1]: 31 of 31

Map 4. Severe Wasting

Number of severely wasted children[2] = 206,206

Note: Number in '000s in the above figure

	Highest burden districts	
1	Nalgonda	37,759
2	Mahbubnagar	31,788
3	Khammam	29,717
4	Adilabad	27,696
5	Hyderabad	26,875

No. of districts with public health concern[1]: 31 of 31

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 factsheet, and the projected population for 2019 was estimated using Census 2011. Note: Grey area in Maps 1-4 indicates districts for which data are not available. [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 total number of children <5 years is 2,754,280.

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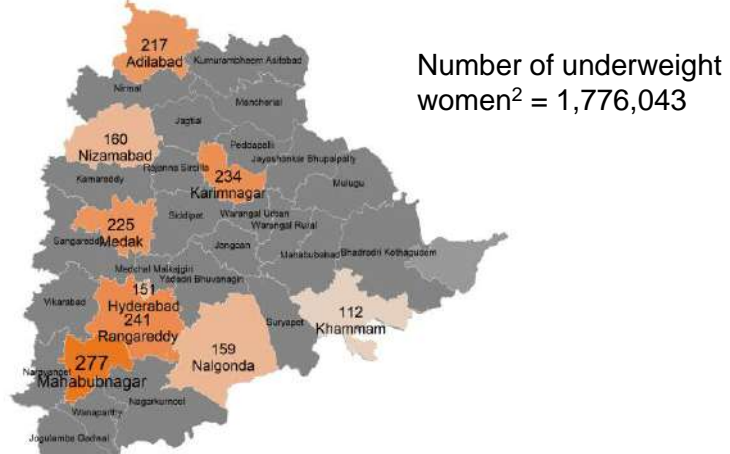
Map 5. Underweight children

Number of underweight children[2] = 806,558
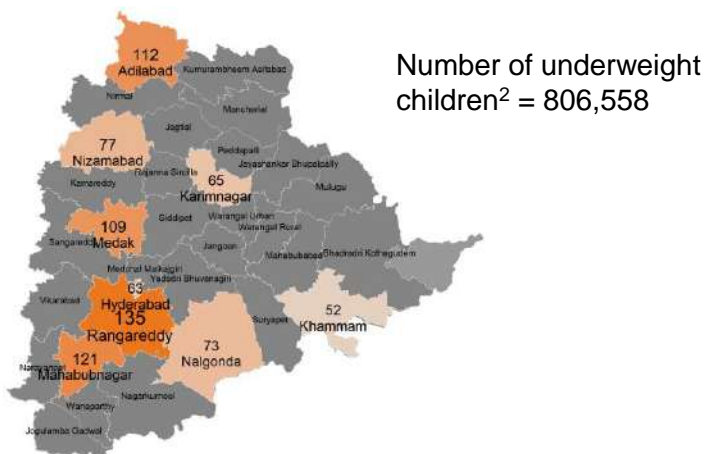
Note: Number in '000s in the above figure

Highest burden districts		
1	Ranga Reddy	135,070
2	Mahbubnagar	120,576
3	Adilabad	111,642
4	Medak	109,326
5	Nizamabad	76,910

No. of districts with public health concern[1]: 30 of 31

Map 6. Underweight women

Number of underweight women[2] = 1,776,043

Note: Number in '000s in the above figure

Highest burden districts		
1	Mahbubnagar	276,716
2	Ranga Reddy	240,986
3	Karimnagar	234,382
4	Medak	225,217
5	Adilabad	216,810

No. of districts with public health concern[1]: 31 of 31

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

Map 7. Anemia among non-pregnant women

Number of non-pregnant anemic women[2] = 5,353,541
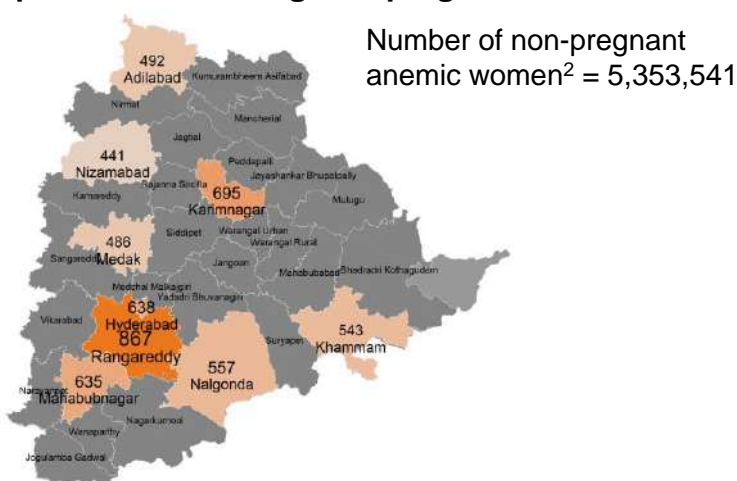
Note: Number in '000s in the above figure

Highest burden districts		
1	Ranga Reddy	866,903
2	Karimnagar	695,183
3	Hyderabad	637,565
4	Mahbubnagar	635,293
5	Nalgonda	556,813

No. of districts with public health concern[1]: 31 of 31

Map 8. Anemia among pregnant women

Number of pregnant anemic women[2] = 97,473
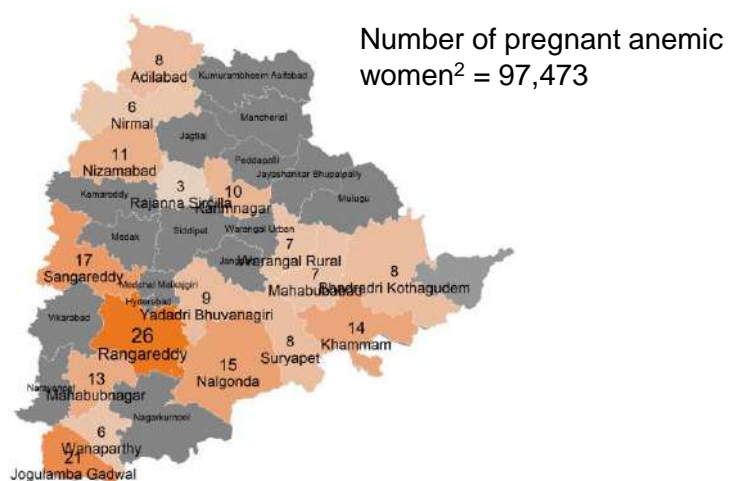
Note: Number in '000s in the above figure

Highest burden districts		
1	Ranga Reddy	25,555
2	Nalgonda	15,231
3	Khammam	13,922
4	Mahbubnagar	12,757
5	Nizamabad	11,374

No. of districts with public health concern[1]: 14 of 31

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 factsheet and projected population for 2019 was estimated using Census 2011.
Note: Gray area in Maps 5-8 indicates districts for which data are not available.[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]The total number of children <5 years is 2,754,280, pregnant women 15-49 years is 770,426, and non-pregnant women 15-49 years is 9,996,449.

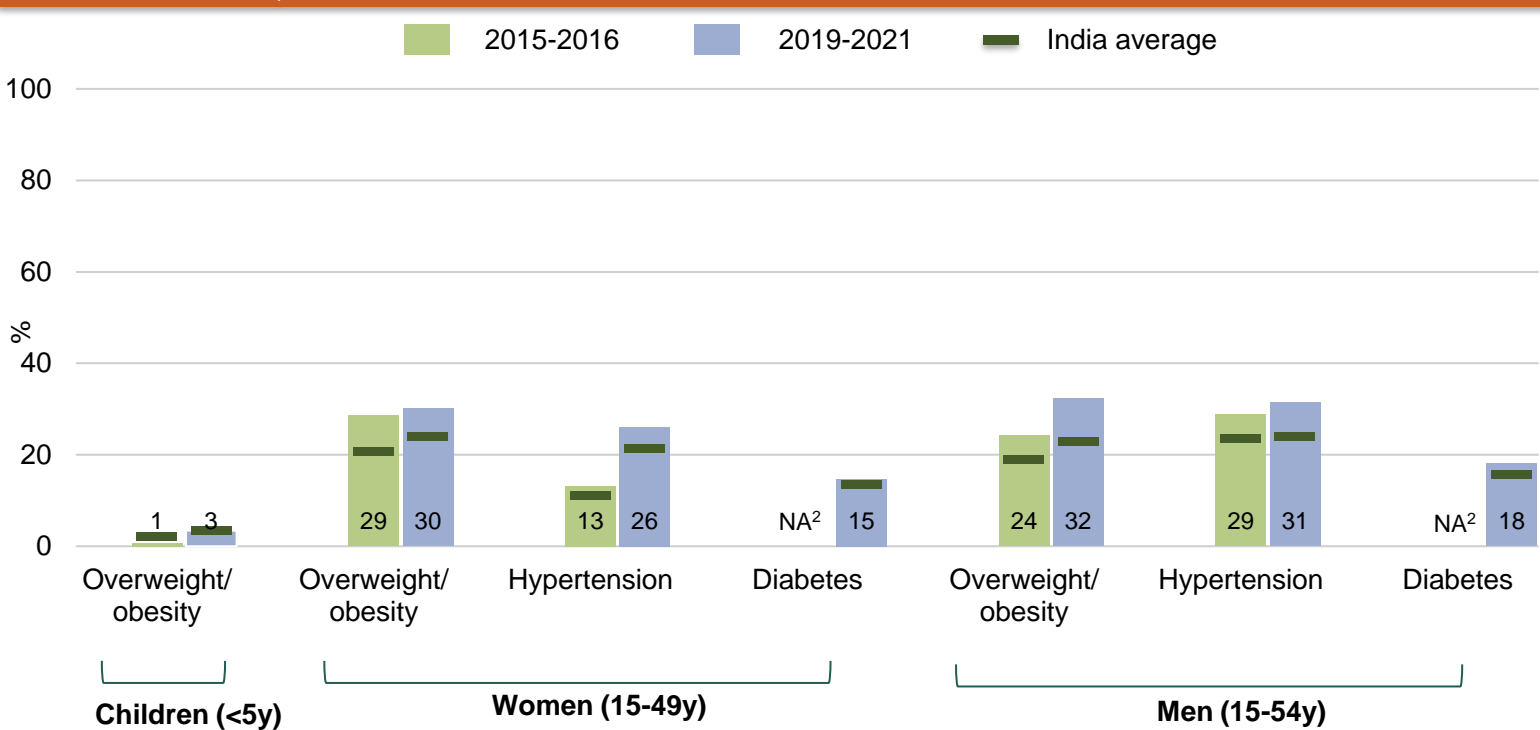# Figure 2. Trends in overweight/obesity & NCDs[1] 2015-2016, 2019-2021

Legend: 2015-2016 | 2019-2021 | India average

Children (<5y): Overweight/obesity — 1, 3

Women (15-49y): Overweight/obesity — 29, 30; Hypertension — 13, 26; Diabetes — NA[2], 15

Men (15-54y): Overweight/obesity — 24, 32; Hypertension — 29, 31; Diabetes — NA[2], 18

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

Category	Outcomes	Worst performing districts (pp)[5]	Best performing districts (pp)[5]	Highest burden districts (thousands)[3]	No of districts with public health concern[4] (total=31)
		Difference between (2019-2021) & (2015-2016)	*Difference between (2019-2021) & (2015-2016)*	*2019-2021*	*2019-2021*
Children <5 years	Overweight/obesity	*Districts not comparable*		Ranga[6]: 18 Mahbubnagar: 15	0
Women (15-49 years)	Overweight/obesity			Ranga[6]: 657 Hyderabad: 620	29
	Hypertension	*Districts not comparable*		Ranga[6]: 460 Hyderabad: 367	30
	Diabetes			Hyderabad: 258 Ranga[6]: 247	1
Men (15-54 years)	Overweight /obesity	*Data not available at district-level*			
	Hypertension	*Districts not comparable*		Ranga[6]: 625 Hyderabad: 555	31
	Diabetes			Hyderabad: 357 Ranga[6]: 349	3

pp: percentage points. Source: NFHS-4 (2015-16) national report and data [IFPRI estimates] and NFHS-5 (2019-2021) national and state factsheets. Hypertension among men are IFPRI estimates for NFHS-4 using man dataset. Hypertension among women was estimated at the district-level for NFHS-4 using woman dataset. Note 1: Telangana state was formed in 2014; therefore, NFHS 3 (2005-06) data are not available for the state.
[1]NCDs: non-communicable diseases. [2]NA refers to the 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. [3]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 (2019-2021) and projected population for 2019 was estimated using Census 2011. [4]Public health concern is defined as prevalence ≥15% for overweight/obesity (children), ≥20% for overweight/obesity (women and men), ≥20% hypertension (women and men), and ≥20% diabetes (women and men) (WHO 2011). [5]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021. No districts are Telangana are comparable. [6]District codes: Ranga: Ranga Reddy.

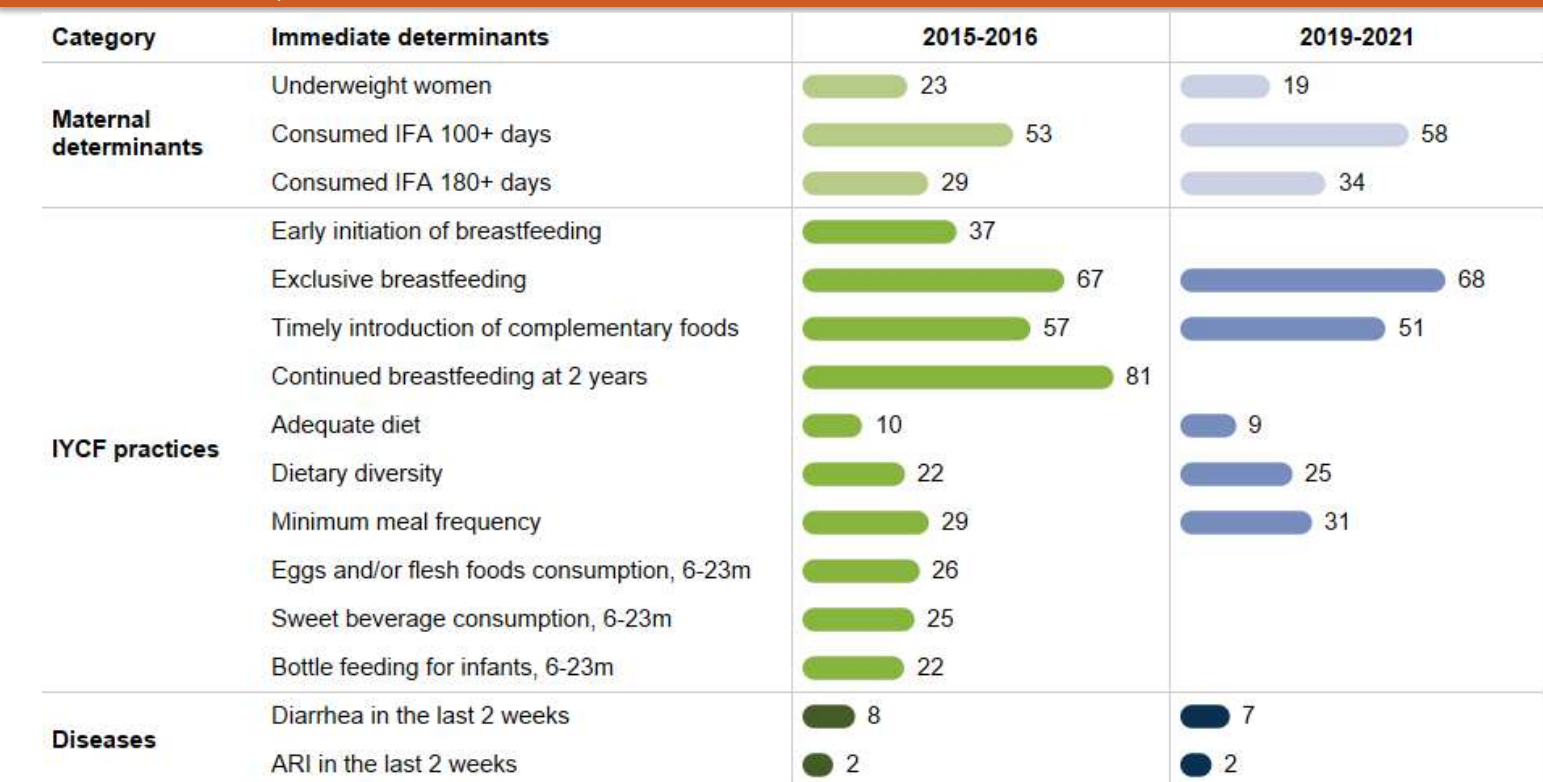# Figure 3. Trends in immediate determinants (%) 2015-2016, 2019-2021

Category	Immediate determinants	2015-2016	2019-2021
Maternal determinants	Underweight women	23	19
	Consumed IFA 100+ days	53	58
	Consumed IFA 180+ days	29	34
IYCF practices	Early initiation of breastfeeding	37	
	Exclusive breastfeeding	67	68
	Timely introduction of complementary foods	57	51
	Continued breastfeeding at 2 years	81	
	Adequate diet	10	9
	Dietary diversity	22	25
	Minimum meal frequency	29	31
	Eggs and/or flesh foods consumption, 6-23m	26	
	Sweet beverage consumption, 6-23m	25	
	Bottle feeding for infants, 6-23m	22	
Diseases	Diarrhea in the last 2 weeks	8	7
	ARI in the last 2 weeks	2	2

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

Category	Immediate determinants	Worst performing districts (pp)[2] *Difference between (2019-2021) & (2015-2016)*	Best performing districts (pp)[2] *Difference between (2019-2021) & (2015-2016)*	Top coverage districts (%)[1] *2019-2021*
Maternal determinants	Underweight women	*Districts not comparable*		Hyderabad: 12.4 Khammam: 12.8
	Consumed IFA 100+ days			Hyderabad: 72.2 Mahabubnagar: 69.1
IYCF practices	Early initiation of breastfeeding	*Districts not comparable*		NA[4]
	Exclusive breastfeeding			Jangoan: 79.3 Jogulamba[3]:76.7
	Timely introduction of complementary foods			NA[4]
	Adequate diet			Nizamabad: 18.4 Suryapet: 15.1
Diseases	Diarrhea in the last two weeks	*Districts not comparable*		Hyderabad: 1.0 Nagarkurnool: 3.6
	ARI in the last two weeks			Nirmal: 0.0 Jagitial: 0.4

pp: percentage points. Source: NFHS-4 (2015-2016) state report and data [IFPRI estimates] and NFHS-5 factsheets (2019-2021). Adequate diet was estimated for NFHS-3 using last child data. Early initiation of breastfeeding, dietary diversity, minimum meal frequency, egg and/or flesh consumption, sweet beverage consumption, and bottle feeding of infants were estimated for NFHS-3 and -4 using last child data. Consumption of IFA 100+ days and consumption of IFA 180+ days were estimated for NFHS-3 using woman data. Note 1: Data on early initiation of breastfeeding (children born in last 2 years), 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 (2019-21)/state report. Definition of early initiation of breastfeeding is based on WHO guidelines. Note 2: Telangana state was formed in 2014; therefore, NFHS 3 (2005-06) data are not available for the state. [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]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021. No districts in Telangana are comparable. [3]District codes: Jogulamba: Jogulamba Gadwal. [4]NA refers to the unavailability of data for a particular indicator in the specified NFHS round.

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

Category	Underlying determinants	2015-2016	2019-2021
Maternal determinants	Women with ≥10 years of education	44	46
	Women 20-24 years married before age of 18 years	26	23
	Women 15-19 years with child or pregnant	11	6
Household determinants	HHs with improved drinking water source	98	99
	HHs using improved sanitation facility	52	76
	HHs with hand washing facility	64	
	Open defecation	31	13
	Safe disposal of feces	40	
	HHs with BPL card	82	85
	HHs with electricity	99	100

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

Category	Underlying determinants	Worst performing districts (pp)[2] *Difference between (2019-2021) & (2015-2016)*	Best performing districts (pp)[2] *Difference between (2019-2021) & (2015-2016)*	Top coverage districts (%)[1] *2019-2021*
Maternal determinants	Women with ≥10 years education	*Districts not comparable*		Hyderabad: 63.2 Medchal[3]: 59.3
	Girls 20-24 years married before age of 18 years			Medchal[3]: 10.2 Hyderabad: 10.6
	Women 15-19 years with child or pregnant			Siddipet: 1.0 Kamareddy: 1.1
Household determinants	HHs with improved drinking water source	*Districts not comparable*		Medchal[3]: 99.9 Medak: 99.9
	HHs with improved sanitation facility			Medchal[3]: 86.2 Khammam: 84.5
	HHs with electricity			Medchal[3]: 100.0 Hyderabad: 99.9

pp: percentage points.
Source: NFHS-4 (2015-2016) national and state reports and data [IFPRI estimates], and NFHS-5 (2019-2021) state factsheets and report.
Note 1: Telangana state was formed in 2014; therefore, NFHS 3 (2005-06) data are not available for the state.
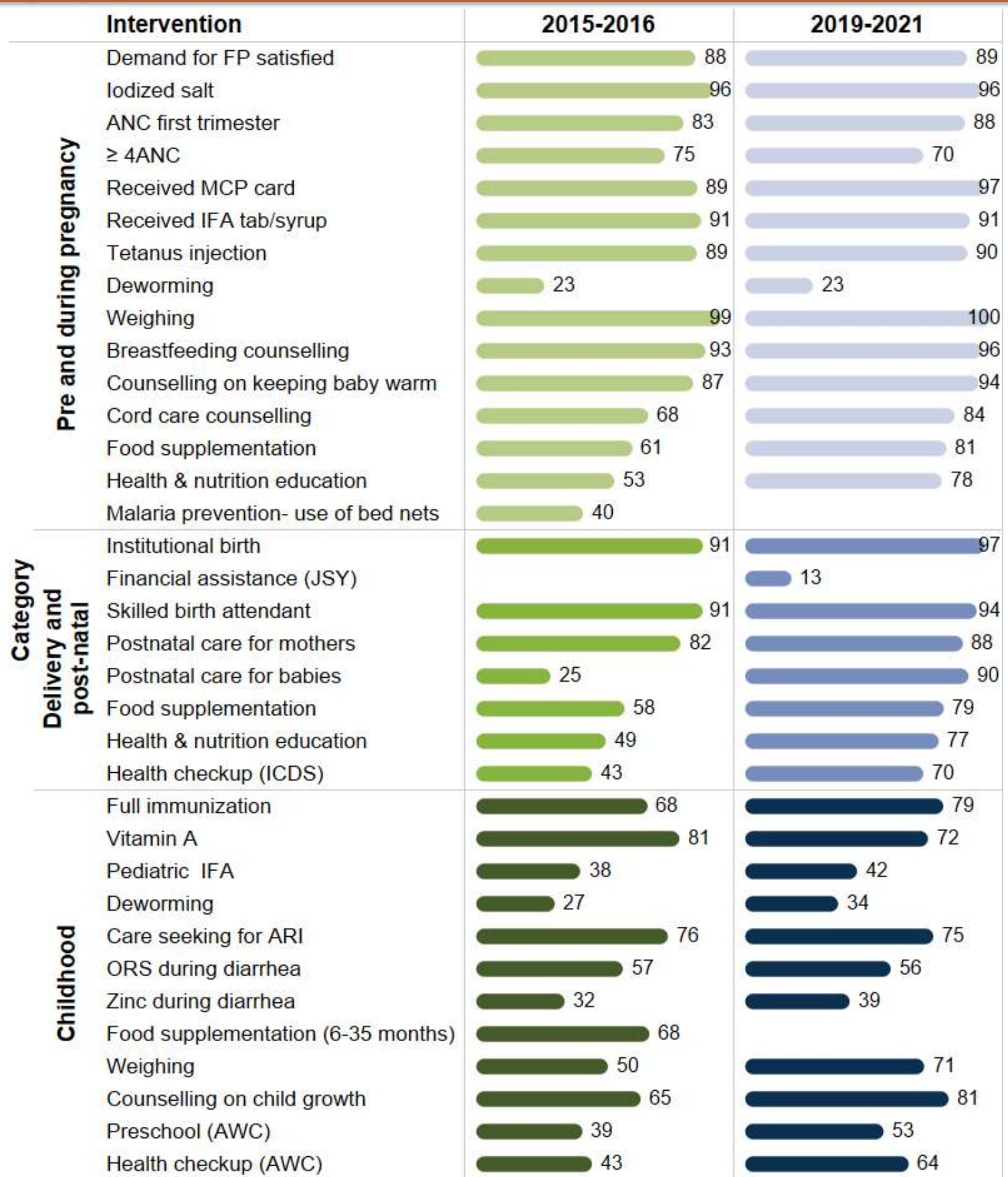Note 2: Safe disposal of feces and HHs with hand washing facility not available in NFHS-5 factsheets (2019-21)/state report.
[1]For all indicators, top coverage districts refer to the districts with the highest prevalence in underlying determinants, except for women 20-24 years married before 18 years and women 15-19 years with child or pregnant for which it refers to the districts with the lowest prevalence in coverage.
[2]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021. No districts in Telangana are comparable.
[3]District codes: Medchal: Medchal-Malkajgiri.

Figure 5. Trends in coverage of interventions across the first 1000 days (%), 2015-2016, 2019-2021

Category	Intervention	2015-2016	2019-2021
Pre and during pregnancy	Demand for FP satisfied	88	89
	Iodized salt	96	96
	ANC first trimester	83	88
	≥ 4ANC	75	70
	Received MCP card	89	97
	Received IFA tab/syrup	91	91
	Tetanus injection	89	90
	Deworming	23	23
	Weighing	99	100
	Breastfeeding counselling	93	96
	Counselling on keeping baby warm	87	94
	Cord care counselling	68	84
	Food supplementation	61	81
	Health & nutrition education	53	78
	Malaria prevention- use of bed nets	40	
Delivery and post-natal	Institutional birth	91	97
	Financial assistance (JSY)		13
	Skilled birth attendant	91	94
	Postnatal care for mothers	82	88
	Postnatal care for babies	25	90
	Food supplementation	58	79
	Health & nutrition education	49	77
	Health checkup (ICDS)	43	70
Childhood	Full immunization	68	79
	Vitamin A	81	72
	Pediatric IFA	38	42
	Deworming	27	34
	Care seeking for ARI	76	75
	ORS during diarrhea	57	56
	Zinc during diarrhea	32	39
	Food supplementation (6-35 months)	68	
	Weighing	50	71
	Counselling on child growth	65	81
	Preschool (AWC)	39	53
	Health checkup (AWC)	43	64

Source: NFHS-4 (2015-2016) national and state reports and data [IFPRI estimates] and NFHS-5 (2019-2021) state factsheet and report.
Note 1: Telangana state was formed in 2014; therefore, NFHS 3 (2005-06) data are not available for the state.
Note 2: Malaria prevention-use of bed nets was estimated for NFHS-4 using woman data. Postnatal care for babies, food supplementation-early childhood, pediatric IFA, and deworming-early childhood were estimated for NFHS-4 using last child data.
Note 3: The following information is not available in the NFHS-5 factsheets and state reports (2019-21): birth preparedness counselling, malaria prevention, and food supplementation (6-35m).
Note 4: Data on demand for family planning satisfied, received IFA, deworming, weighing, counselling on breastfeeding, keeping baby warm, cord care during pregnancy, food supplementation, health and nutrition education during pregnancy and post-natal phases, financial assistance under JSY, pediatric IFA, deworming during early childhood, weight measurement during childhood, and counselling on child growth for 2019-2021 are taken from NFHS-5 state reports.
Note 5: Refer to district dashboard for the inter-district variability in the coverage of interventions.

Intervention coverage at district level, 2019-2021

Legend: <20% | 20-<40% | 40-<60% | 60-<80% | >=80% | Not Available

District name	Pre-pregnancy: Demand for FP satisfied	Iodized salt	Pregnancy: 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	Delivery & postnatal: Institutional birth	Financial assistance (JSY)	Skilled birth attendant	Postnatal care for mothers	Postnatal care for babies	Food supplementation	Health & nutrition education	Health checkup	Early childhood: 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	Preschool at AWC	Health checkup
TELANGANA	89.4	95.8	88.5	70.4	96.7	90.6	89.6	22.6	99.8		95.6	94.4	84.0	80.5	78.4		97.0	13.3	93.6	87.6	90.0	79.3	77.1	70.4	79.1	72.4	41.7	33.5	74.8	56.3	38.5		70.8	81.4	53.2	64.1
Adilabad		97.6	89.7	74.8	94.1	80.4	90.9	29.7									94.1	13.2	93.9	83.4	80.3				69.3	85.7			75.0	65.0	42.7					
Bhadradri Kothagudem		97.7	92.8	70.1	98.6	90.6	91.2	31.9									97.4	18.4	94.2	87.1	85.4				80.4	73.2			82.4							
Hyderabad		97.4	87.9	69.9	94.4	90.8	89.6	20.8									98.3	6.7	94.6	91.2	94.9				73.8	62.0										
Jagtial		96.5	94.6	81.9	95.5	88.6	87.9	18.3									94.4	19.8	91.9	84.1	89.9				77.7	72.5			73.0							
Jangoan		96.8	89.7	65.4	98.9	94.4	86.1	21.7									99.6	5.3	90.1	85.6	96.5				84.2	80.8			81.0							
Jayashankar Bhupalapally		97.7	94.6	72.7	94.0	85.1	94.1	24.1									99.5	13.6	95.1	89.1	89.6				87.9	70.5			71.2							
Jogulamba Gadwal		85.3	87.5	72.9	96.5	86.6	92.6	21.8									94.2	12.1	91.7	88.3	88.2				86.9	75.0			88.7							
Kamareddy		93.6	79.5	69.6	96.8	93.4	90.6	23.6									97.1	18.1	93.2	86.8	89.0				75.5	79.6			72.8							
Karimnagar		99.1	92.3	69.6	88.2	91.8	85.2	17.1									98.4	9.9	86.9	89.5	95.9				73.4	79.8			70.3	59.2	36.8					
Khammam		96.6	84.9	76.3	99.4	95.1	97.3	30.3									97.9	11.3	93.2	93.2	91.5				86.6	70.9			73.3							
Komaram Bheem Asifabad		92.9	80.0	68.8	96.7	92.5	91.8	26.2									82.0	22.9	83.4	85.5	81.9				76.2	75.0			59.2							
Mahabubabad		96.2	87.8	67.7	98.1	84.4	94.0	27.6									97.7	5.5	95.4	91.5	94.3				76.1	73.6			79.7							
Mahabubnagar		94.1	86.2	62.6	98.7	93.6	90.2	25.9									98.1	14.2	97.6	84.9	85.5				89.4	70.8			81.2							
Mancherial		97.7	86.7	64.7	93.6	95.4	89.6	24.5									90.1	9.4	96.9	87.7	85.3				76.0	63.9			67.5							
Medak		97.1	78.9	68.5	97.7	89.2	81.3	27.7									98.9	13.5	92.9	80.8	89.8				69.3	85.2			60.1	41.6	37.5					
Medchal-Malkajgiri		98.8	89.4	69.6	96.2	90.3	92.2	14.7									98.3	8.9	96.2	90.6	90.1				76.1	69.5			63.8							
Nagarkurnool		92.0	92.4	75.1	97.0	86.4	88.5	23.4									98.0	14.7	94.5	90.3	91.0				81.1	64.7			86.6							
Nalgonda		87.5	90.5	65.7	98.7	96.1	91.8	28.3									98.3	21.5	99.0	92.2	95.3				78.3	72.6			76.7							
Nirmal		95.1	85.2	69.7	96.9	87.2	91.2	24.6									96.7	10.0	87.2	91.0	91.0				75.3	84.1			56.3							
Nizamabad		96.9	87.9	78.5	96.2	90.0	80.0	22.6									97.3	12.1	91.8	79.5	85.9				86.1	83.0			67.0	56.6	42.2					
Peddapalli		97.8	83.5	77.9	92.9	88.4	87.0	25.7									96.5	19.1	96.2	87.6	89.8				73.1	66.3			72.3							
Rajanna Sircilla		98.5	90.4	67.1	99.0	90.8	96.3	26.7									97.6	10.5	95.4	89.9	90.1				84.1	73.3			72.7							
Ranga Reddy		98.2	95.5	75.1	95.3	83.4	90.3	17.4									97.2	15.5	92.7	89.8	90.0				85.8	67.8			72.2							
Sangareddy		97.5	82.8	66.4	98.3	92.9	89.5	10.4									93.0	19.7	95.1	84.7	89.0				78.5	74.0			77.8	53.1	50.7					
Siddipet		98.5	86.1	62.6	98.9	94.3	88.8	23.0									99.7	18.2	90.5	74.1	85.9				63.1	81.0			71.1							
Suryapet		93.0	92.7	70.4	99.7	97.8	87.1	20.6									95.9	16.2	94.2	88.6	88.7				70.4	70.2			61.6							
Vikarabad		89.1	78.0	54.8	98.7	93.0	83.2	18.0									95.0	9.1	86.7	80.8	86.9				86.2	66.1			77.8	44.5	31.6					
Wanaparthy		93.5	91.4	62.8	100.0	95.9	92.6	23.8									99.0	13.8	96.6	87.6	83.6				87.0	71.4			82.3							
Warangal Rural		97.4	86.8	70.4	98.7	89.7	82.3	20.7									100.0	18.3	94.5	93.8	90.5				79.0	83.7			69.8	25.8	41.7					
Warangal Urban		96.6	88.4	71.3	92.8	92.8	96.2	19.6									99.7	11.2	93.0	93.2	92.3				70.1	78.5			81.5							
Yadadri Bhuvanagiri		98.7	92.1	67.2	97.9	91.9	91.5	28.2									97.7	9.0	94.1	93.2	94.9				76.7	69.6			67.3							

Source: NFHS-5 district factsheets and state reports (2019-21).

Note 1: Data on received IFA tab/syrup, deworming during pregnancy and financial assistance (JSY) for 2019-21 are taken from NFHS-5 factsheets (2019-21).

Note 2: The following information is not available in the NFHS-5 factsheets and state reports (2019-21): (1) Information on preconception and pregnancy-related indicators, including demand for FP satisfied, weighing, birth preparedness 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, health and nutrition education, and health checkups; and (3) early childhood-related indicators, including pediatric IFA, deworming, food supplementation (6-35m), preschool attendance, health checkups, weighing, and counselling on child growth.

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

Category	Interventions	Worst performing districts (pp)[1] _Difference between (2019-2021) & (2015-2016)_	Best performing districts (pp)[1] _Difference between (2019-2021) & (2015-2016)_	Top coverage districts (%) _2019-2021_
Pregnancy	ANC first trimester			Ranga Reddy: 95.5 Jagitial: 94.6
	≥4 ANC visits	_Districts not comparable_		Jagitial: 81.9 Kamareddy: 79.5
	Received MCP Card			Wanaparthy: 100.0 Suryapet: 99.7
	Tetanus injection			Khammam: 97.3 Rajanna Sircilla: 96.3
Delivery and post-natal	Institutional birth			Warangal Rural: 100.0 Warangal Urban: 99.7
	Skilled birth attendant	_Districts not comparable_		Nalgonda: 99.0 Mahabubnagar: 97.6
	Postnatal care for mothers			Warangal Rural: 93.8 Yadadri Bhuvanagiri: 93.2
	Postnatal care for babies			Jangoan: 96.5 Karimnagar: 95.9
Early childhood	Full immunization	_Districts not comparable_		Mahabubnagar: 89.4 Jayashankar[2]: 87.9
	Vitamin A supplementation			Adilabad: 85.7 Medak: 85.2
	Care seeking for ARI	_Data not available at district-level_		Jogulamba[2]: 88.7 Nagarkurnool: 86.6
	ORS treatment during diarrhea	_Data not available at district-level_		Adilabad: 65.0 Karimnagar: 59.2
	Zinc treatment during diarrhea	_Data not available at district-level_		Sangareddy: 50.7 Adilabad: 42.7

Key takeaways

Children: Stunting and wasting prevalence increased by 5 and 4 percentage points (pp) respectively, between 2016 and 2021. Underweight and anemia increased by 4pp and 9pp respectively between 2016 and 2021.
Women: Underweight declined by 4pp from 2016 to 2021. Anemia increased by 1pp and 5pp among non-pregnant and pregnant women respectively, between 2016 and 2021. Overweight/obesity increased by 1pp between 2016 and 2021.
Men: Overweight/obesity increased by 8pp between 2016 and 2021.
Attention is needed to improve (%s in 2021):
- *Outcomes:* Anemia in children (70%), among non-pregnant women (58%) and pregnant women (53%); overweight/obesity among men and women (30-32%)
- *Immediate determinants:* Adequate diet (9%)
- *Underlying determinants:* Women with ≥ 10 years education (46%)
- *Coverage of interventions:* ORS during diarrhea (56%); zinc during diarrhea (39%); financial assistance (13%); pediatric IFA (42%); deworming for pregnant women and children (23 -34%)

pp: percentage points. Source: NFHS-4 (2015-2016) state and national reports and data [IFPRI estimates], and NFHS-5 (2019-2021) state reports/factsheets. Postnatal care for babies was estimated for NFHS-4 using last child data at the state- and district-level.
Note 1: Telangana state was formed in 2014; therefore, NFHS-3 (2005-06) data are not available for the state.
Note 2: Interventions' coverage are based on the last child data.
[1]The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2021. No districts in Telangana are comparable.
[2]District codes: Jayashankar: Jayashankar Bhupalapally; Jogulamba: Jogulamba Gadwal.

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/m^2); sample excluded pregnant women and women with a birth in the preceding 2 months.
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 women aged 15-49 who are overweight or obese (BMI ≥25.0 kg/m2); sample excluded pregnant women and women with a birth in the preceding 2 months.
Overweight/obesity – men	Percentage of men aged 15-49 who are overweight or obese (BMI ≥25.0 kg/m^2)
Hypertension among women[^*%]	Percentage of women aged 15-49 with elevated blood pressure (Systolic ≥140 mm Hg or diastolic ≥90 mm Hg) or is currently taking medication to control blood pressure.
Hypertension among men[^*]	Percentage of men aged 15-54 with elevated blood pressure (Systolic ≥140 mm Hg or diastolic ≥90 mm Hg) or is currently taking medication to control blood pressure.
Diabetes among women[^0]	Percentage of women aged 15-49 with high (>140 mg/dl) or very high (>160 mg/dl) blood sugar or taking medicine to control blood sugar.
Diabetes among men[^0]	Percentage of men aged 15-54 with high (>140 mg/dl) or very high (>160 mg/dl) blood sugar or taking medicine to control blood sugar.
Immediate determinants	
Underweight women	Percentage of women aged 15-49 whose Body Mass Index (BMI) is below normal (BMI <18.5 kg/m^2); sample excluded pregnant women and women with a birth in the preceding 2 months.
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
Consumed IFA 180+ days[*]	Percentage of mothers aged 15-49 who consumed iron folic acid for 180 days or more during the last pregnancy in last five years preceding the survey
Early initiation of breastfeeding[#*]	Percentage of children breastfed within one hour of birth for the last child born in the 2 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	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 living with mother 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
Dietary diversity[*@]	Percentage of youngest children 6-23 months of age who were fed a diet that met minimum dietary diversity during the previous day.
Minimum meal frequency[*@]	Percentage of youngest children 6-23 months of age who were fed the minimum recommended number of times 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
Diarrhea in the last two weeks	Percentage of children under age 5 who had diarrhea in the 2 weeks preceding the survey
ARI in the last two weeks	Percentage of children under age 5 who had symptoms of acute respiratory infection (ARI) in the 2 weeks preceding the survey
Underlying determinants	
Women with ≥10 years education	Percentage of women aged 15-49 with 10 or more years of schooling
Women 20-24 years married before age of 18 years[*]	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	Population living in households with an improved drinking-water source
HHs using improved sanitation facility	Population living in households that use an improved sanitation facility
HHs with hand washing facility[^\$]	Percentage of households in which a place for washing hands was observed.
Open defecation[@%]	Percentage of households that have 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 households with BPL card
HHs with electricity	Population living in households with electricity

Note: Unless specified, indicators values for NFHS-3 taken from either NFHS-3 national or state reports.
[^]Indicator cannot be constructed using unit-level NFHS-3 data. [0]Indicator cannot be constructed using unit-level NFHS-4 data. [$]Indicator not available in NFHS-5 factsheet/report. [@]Indicator not available in NFHS-5 factsheet but in NFHS-5 report. [%]Indicator not available in NFHS-5 factsheet but available in NFHS-4 report. [*]Indicator estimated using NFHS-3 and/or NFHS-4 unit-level data [#]Indicator constructed based on WHO guidelines.

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	Percentage of households using iodized salt
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 counselling0$	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 (for the last pregnancy 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@%	Among children under 6 years, percentage whose mother received specific benefits from AWC during pregnancy: supplementary food
Health & nutrition education – pregnancy@%	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	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	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@%	Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: supplementary food
Health & nutrition education – postnatal@%	Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: health and nutrition education
Health checkup (ICDS)@%	Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: health checkup.
Full immunization	Percentage of children aged 12-23 months fully vaccinated based on information from either vaccination card or mother's recall
Vitamin A – early childhood*	Percentage of children aged 9-35 months who received a vitamin A dose in the last 6 months
Pediatric IFA*@%	Percentage of youngest children aged 6-23 months who received iron supplements in the past 7 days preceding the survey.
Deworming – early childhood*@%	Percentage of youngest children aged 6-23 months who received deworming tablets in the last 6 months preceding the survey.
Care seeking for ARI	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	Percentage of children under age 5 years with diarrhea in the 2 weeks preceding the survey who received ORS
Zinc during diarrhea	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
Preschool at AWC@%	Percentage of children age 36-71 months who went for early childhood care/preschool at an AWC in the 12 months preceding the survey.
Health checkup (AWC)@%	Percentage of children age under 6 years who received health checkups from an AWC in the 12 months preceding the survey

Note: Unless specified, indicators values for NFHS-3 taken from either NFHS-3 national or state reports.
^Indicator cannot be constructed using unit-level NFHS-3 data. 0Indicator cannot be constructed using unit-level NFHS-4 data. $Indicator not available in NFHS-5 factsheet/report. @Indicator not available in NFHS-5 factsheet but in NFHS-5 report. %Indicator not available in NFHS-5 factsheet but available in NFHS-4 report. *Indicator estimated using NFHS-3 and/or NFHS-4 unit-level data. #Indicator constructed based on WHO guidelines.

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