

State Nutrition Profile: Assam

ABOUT THIS DATA NOTE

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

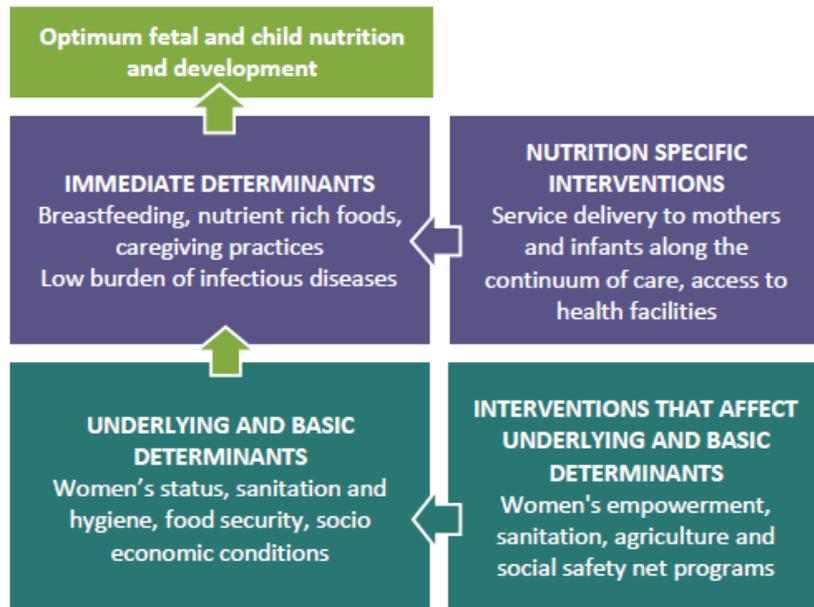
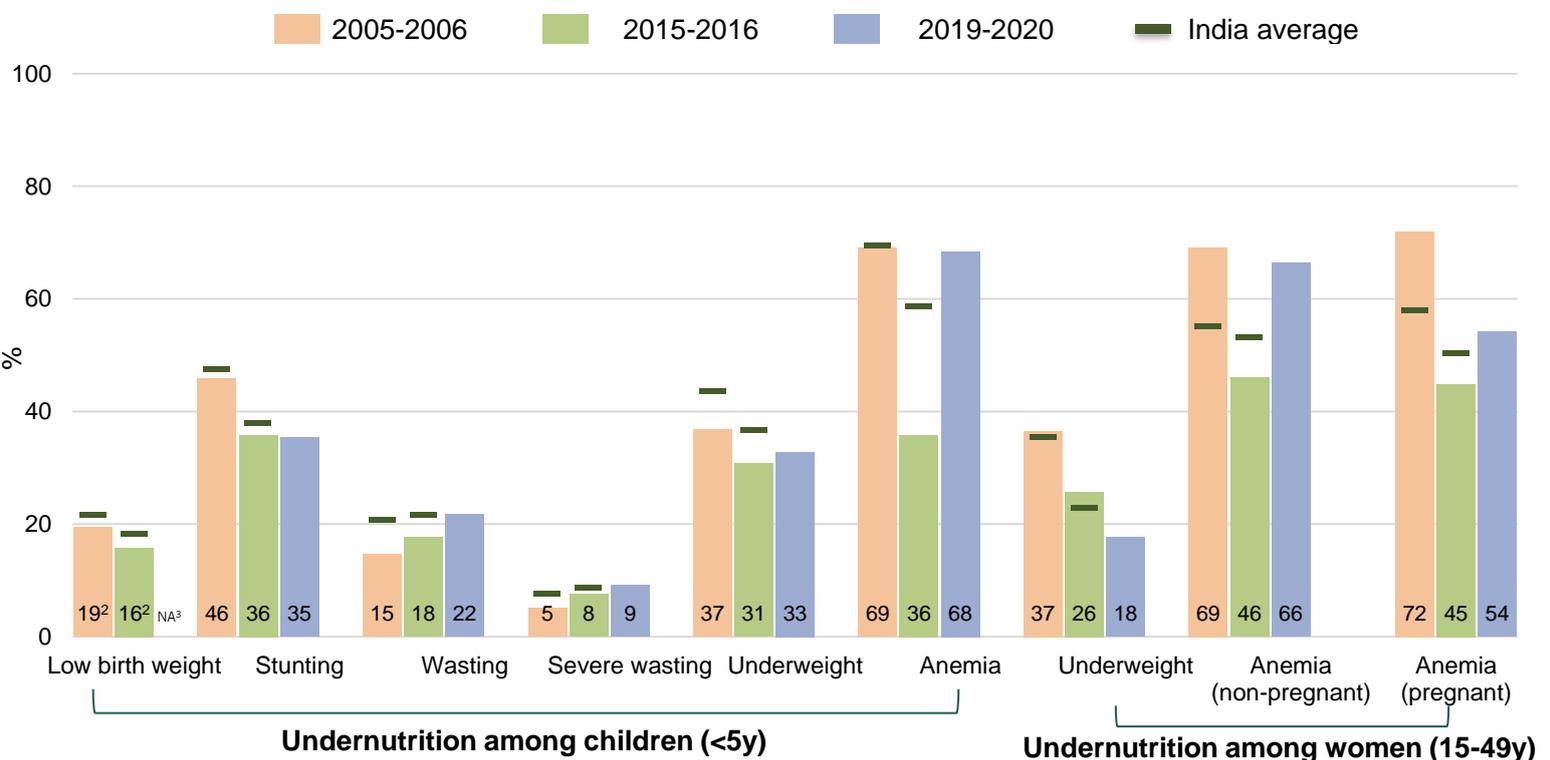


Figure 1. Trends in undernutrition outcomes, 2005-2006, 2015-2016, 2019-2020

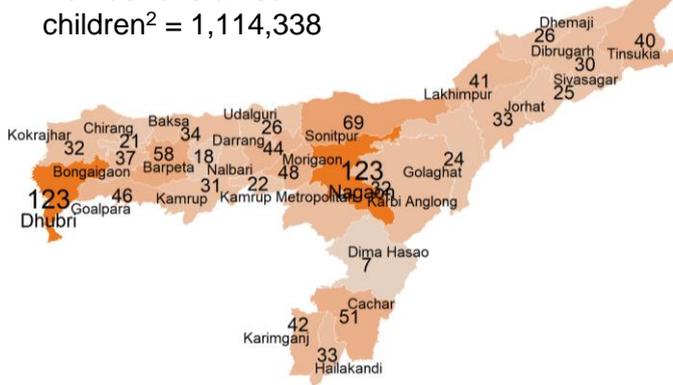


Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state factsheets (2019-2020). Note: Adult nutrition outcomes are based on the woman dataset, while child nutrition outcomes are based on all child data. ¹WHO. Nutrition Landscape Information System (NLIS). Help Topic: Malnutrition in children. Stunting, wasting, overweight and underweight. (<https://apps.who.int/nutrition/landscape/help.aspx?menu=0&helpid=391&lang=EN>). ²In NFHS-3, 77% of data was missing, while 25% 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

Number of stunted children² = 1,114,338



Note: Number in '000s in the above figure

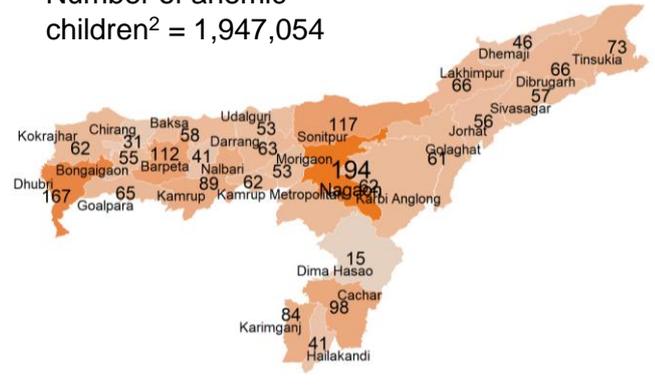
Highest burden districts

| | | |
|---|----------|---------|
| 1 | Dhubri | 123,269 |
| 2 | Nagaon | 122,630 |
| 3 | Sonitpur | 68,999 |
| 4 | Barpeta | 58,475 |
| 5 | Cachar | 50,622 |

No. of districts with public health concern¹: 0 of 27

Map 2. Anemia

Number of anemic children² = 1,947,054



Note: Number in '000s in the above figure

Highest burden districts

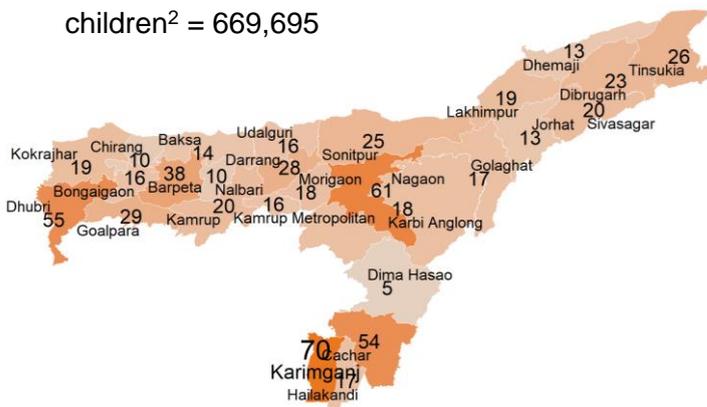
| | | |
|---|----------|---------|
| 1 | Nagaon | 194,265 |
| 2 | Dhubri | 166,899 |
| 3 | Sonitpur | 117,208 |
| 4 | Barpeta | 111,930 |
| 5 | Cachar | 97,919 |

No. of districts with public health concern¹: 0 of 27

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

Map 3. Wasting

Number of wasted children² = 669,695



Note: Number in '000s in the above figure

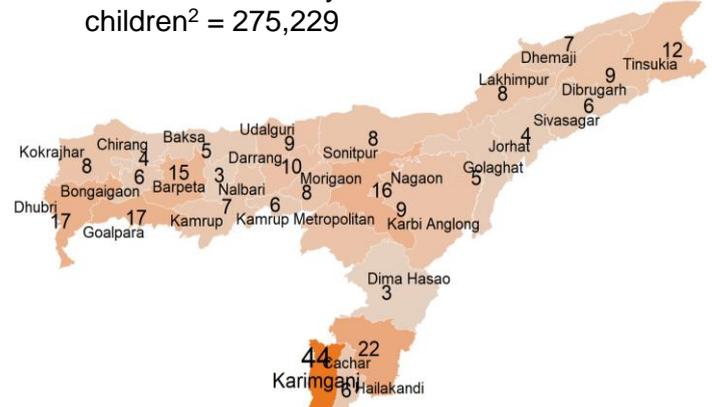
Highest burden districts

| | | |
|---|-----------|--------|
| 1 | Karimganj | 70,030 |
| 2 | Nagaon | 61,157 |
| 3 | Dhubri | 54,645 |
| 4 | Cachar | 54,149 |
| 5 | Barpeta | 38,264 |

No. of districts with public health concern¹: 1 of 27

Map 4. Severe Wasting

Number of severely wasted children² = 275,229



Note: Number in '000s in the above figure

Highest burden districts

| | | |
|---|-----------|--------|
| 1 | Karimganj | 44,498 |
| 2 | Cachar | 22,048 |
| 3 | Dhubri | 17,029 |
| 4 | Goalpara | 16,986 |
| 5 | Nagaon | 16,393 |

No. of districts with public health concern¹: 25 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 data) and projected population for 2019 was estimated using Census 2011.

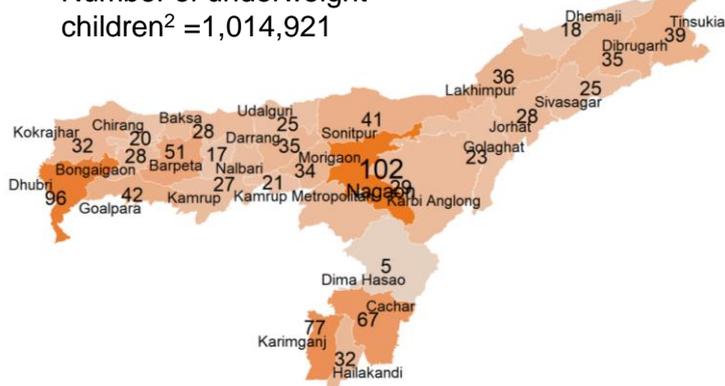
¹Public health concern is defined as $\geq 20\%$ for stunting, $\geq 40\%$ for anemia, $\geq 10\%$ for wasting, and $\geq 2\%$ for severe wasting (WHO 2011).

²The total number of children <5 years is 3,154,956.

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

Map 5. Underweight children

Number of underweight children² = 1,014,921



Note: Number in '000s in the above figure

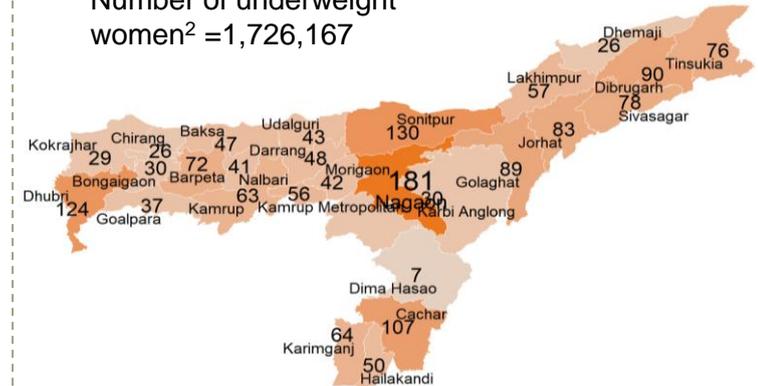
Highest burden districts

| | | |
|---|-----------|---------|
| 1 | Nagaon | 102,139 |
| 2 | Dhubri | 96,073 |
| 3 | Karimganj | 77,179 |
| 4 | Cachar | 67,378 |
| 5 | Barpeta | 51,411 |

No. of districts with public health concern¹: 0 of 27

Map 6. Underweight women

Number of underweight women² = 1,726,167



Note: Number in '000s in the above figure

Highest burden districts

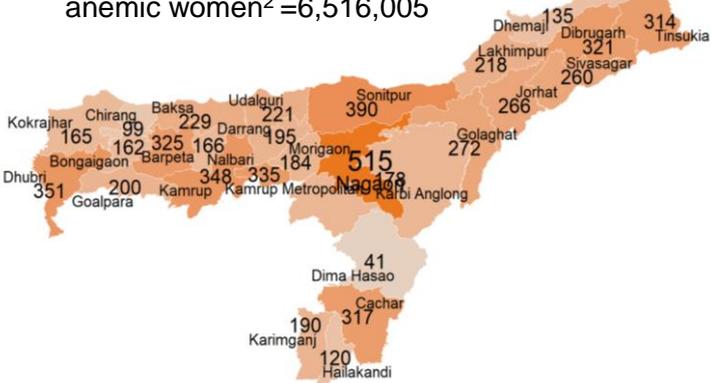
| | | |
|---|-----------|---------|
| 1 | Nagaon | 181,499 |
| 2 | Sonitpur | 129,755 |
| 3 | Dhubri | 123,725 |
| 4 | Cachar | 107,412 |
| 5 | Dibrugarh | 90,433 |

No. of districts with public health concern¹: 1 of 27

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

Map 7. Anemia among non-pregnant women

Number of non-pregnant anemic women² = 6,516,005



Note: Number in '000s in the above figure

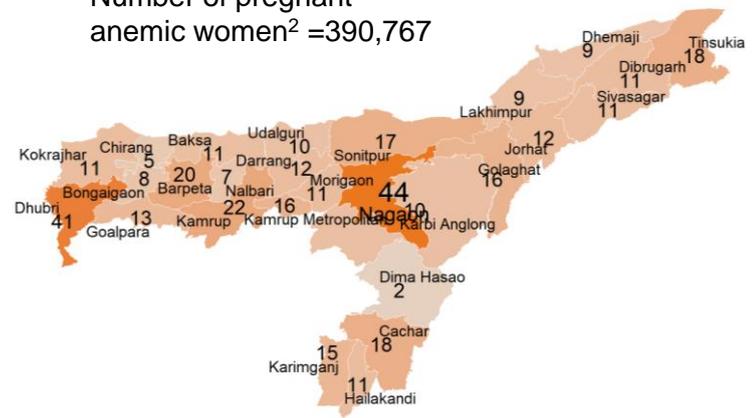
Highest burden districts

| | | |
|---|---------------------|---------|
| 1 | Nagaon | 514,949 |
| 2 | Sonitpur | 389,872 |
| 3 | Dhubri | 351,111 |
| 4 | Kamrup | 347,923 |
| 5 | Kamrup Metropolitan | 334,529 |

No. of districts with public health concern¹: 0 of 27

Map 8. Anemia among pregnant women

Number of pregnant anemic women² = 390,767



Note: Number in '000s in the above figure

Highest burden districts

| | | |
|---|---------|--------|
| 1 | Nagaon | 44,171 |
| 2 | Dhubri | 40,745 |
| 3 | Kamrup | 21,525 |
| 4 | Barpeta | 20,314 |
| 5 | Cachar | 17,971 |

No. of districts with public health concern¹: 0 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. ¹Public 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). ²The total number of children <5 years is 3,154,956, pregnant women 15-49 years is 703,241, and non-pregnant women 15-49 years is 9,063,607.

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

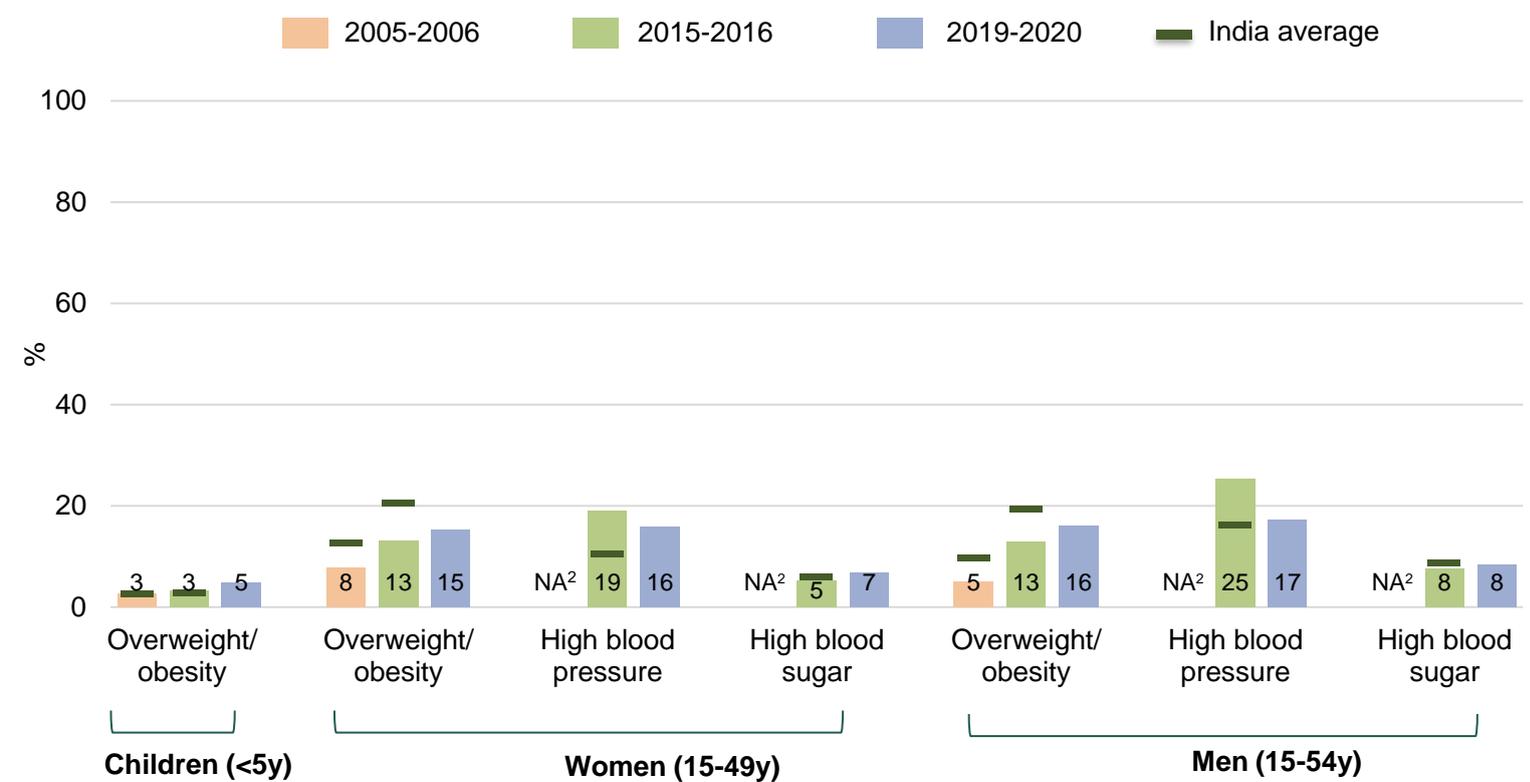


Table 1. Overweight/obesity & NCDs¹ at district level
2015-2016, 2019-2020

| Category | Outcomes | Worst performing districts (pp) | Best performing districts (pp) | Highest burden districts (thousands) ² | No of districts with public health concern ³ (total=27) |
|-----------------------------|---------------------|---|---|---|--|
| | | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>Difference between (2019-2020) & (2015-2016)</i> | 2019-2020 | 2019-2020 |
| Children <5 years | Overweight/obesity | Dima Hasao:+10.5 Baksa:+6.1 | Goalghat:-2.1 Karimganj:-1.1 | Nagaon: 23 Dhubri: 15 | 2 |
| | Overweight/obesity | Kamrup:+8.8 Barpeta:+4.7 | Kamrup m ⁶ :-5.0 Karimganj:-3.8 | Kamrup:11 Nagaon:11 | 0 |
| Women (15-49 years) | High blood pressure | Hailakandi:+6.4 Baksa:+1.4 | Barpeta:-11.4 Bongaigaon:-11.0 | Sonitpur:136 Nagaon:99 | 0 |
| | High blood sugar | Tinsukia:+4.8 Cachar:+4.4 | Lakhimpur:-2.5 Morigaon:-2.3 | Nagaon:70 Barpeta:40 | 0 |
| Men (15-54 years) | Overweight/obesity | <i>Data not available at district level</i> | | | |
| | High blood pressure | Hailakandi:+7.6 | Kokrajhar:-20.3 Bongaigaon:-18.9 | Sonitpur:137 Dhubri:105 | 0 |
| | High blood sugar | Kamrup:+5.0 2 districts ⁷ :+4.8 | Golaghat:-7.9 Lakhimpur:-6.9 | Nagaon:91 Barpeta:52 | 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. ²NA refers to the unavailability of data for a particular indicator in the specified NFHS round. ³Burden: 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) and projected population for 2019 was estimated using Census 2011. ⁴Public health concern is defined as prevalence $\geq 15\%$ for overweight/obesity (children), $\geq 20\%$ for overweight/obesity (women and men), $\geq 20\%$ high blood pressure (women and men), and $\geq 20\%$ high sugar (women and men) (WHO 2011). ⁵The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. ⁶Kamrup m: Kamrup metropolitan. ⁷Cachar, Hailakandi.

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

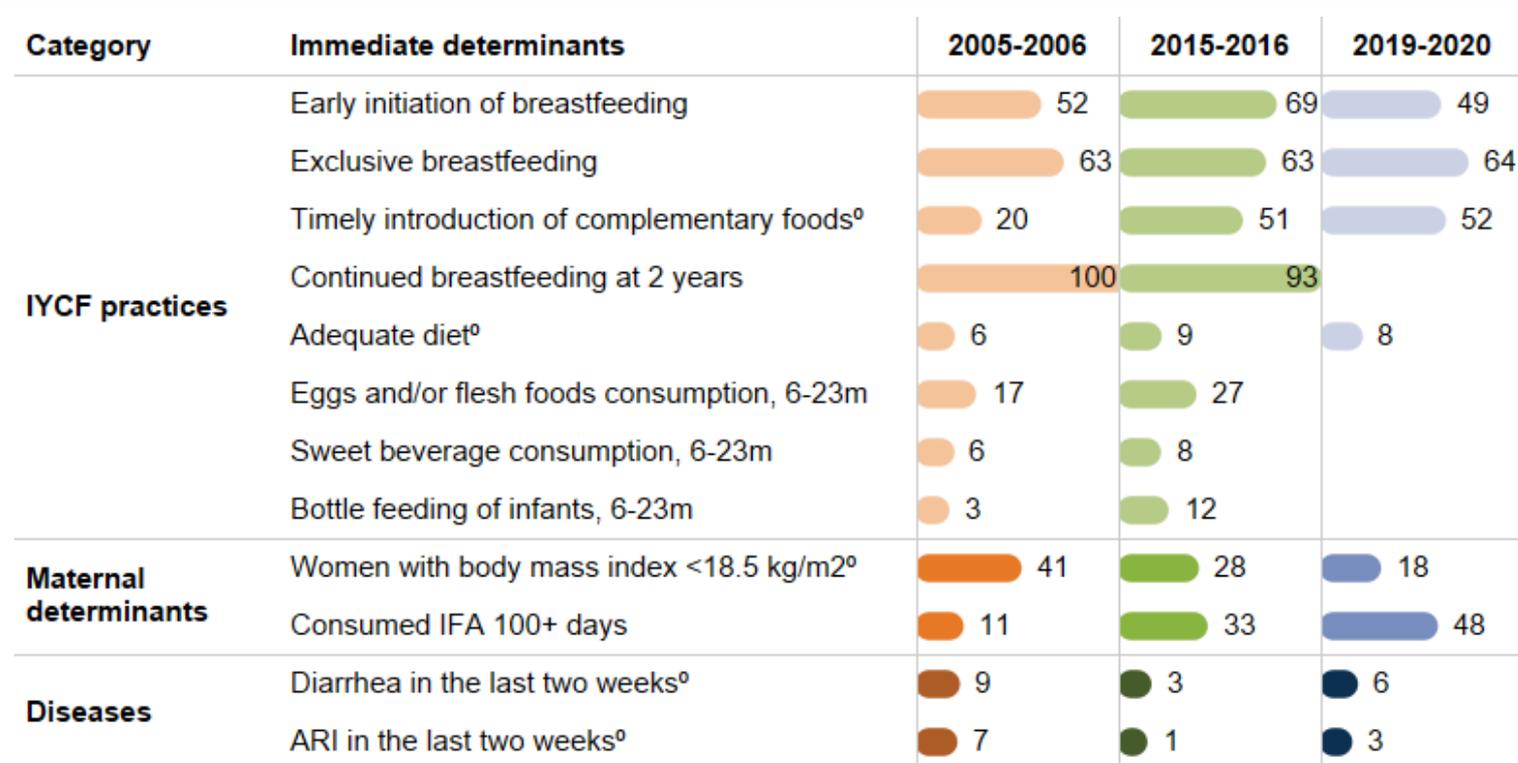


Table 2. Immediate determinants at district-level
2015-2016, 2019-2020

| Category | Immediate determinants | Worst performing districts (pp) | Best performing districts (pp) | Top coverage districts (%) ¹ |
|-----------------------|---|---|---|---|
| | | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>2019-2020</i> |
| IYCF practices | Early initiation of breastfeeding | Goalpara:-43.2 Baksa:-41.4 | Karimganj:+8.8 | Biswanath:63 2 districts ⁶ :62 |
| | Exclusive breastfeeding | Data not available for all districts | | Lakhimpur:81 Chirang:77 |
| | Timely introduction of complementary foods ^o | Data not available for all districts | | Baksa:69 Karimganj:35 |
| | Adequate diet ^o | Dibrugarh:-11.5 Kamrup:-10.6 | 2 districts ⁴ : +8.0 Nalbari:+6.3 | Sivasagar:24 Karbi Anglong:18 |
| Maternal determinants | Women with BMI<18.5 kg/m ^{2o} | Goalghat:+0.2 | Cachar:-20.4 Tinsukia:-19.7 | Hailakandi:26 2 districts ⁷ :25 |
| | Consumed IFA 100+ days | Lakhimpur:-4.0 | Kokrajhar:+33.5 Barpeta:+30.1 | 2 districts ⁸ : 64 Kokrajhar:61 |
| Diseases | Diarrhea in the last two weeks ^o | Golaghat:+6.9 Chirang:+5.3 | Cachar:-3.9 Dhemaji:-3.8 | 2 districts ⁹ :10 Nagaon:9 |
| | ARI in the last two weeks ^o | Hailakandi:+4.9 Golaghat:+3.5 | Baksa:-0.7 2 districts ⁵ :-0.4 | Morigaon:6 Hailakandi:5 |

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 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. ³The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. ⁴Tinsukia, Darrang, ⁵Tinsukia, Cachar, ⁶Morigaon, Nagaon. ⁷Charaideo, Golaghat, ⁸Biswanath, Golaghat, ⁹Charaideo, Dhubri.

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

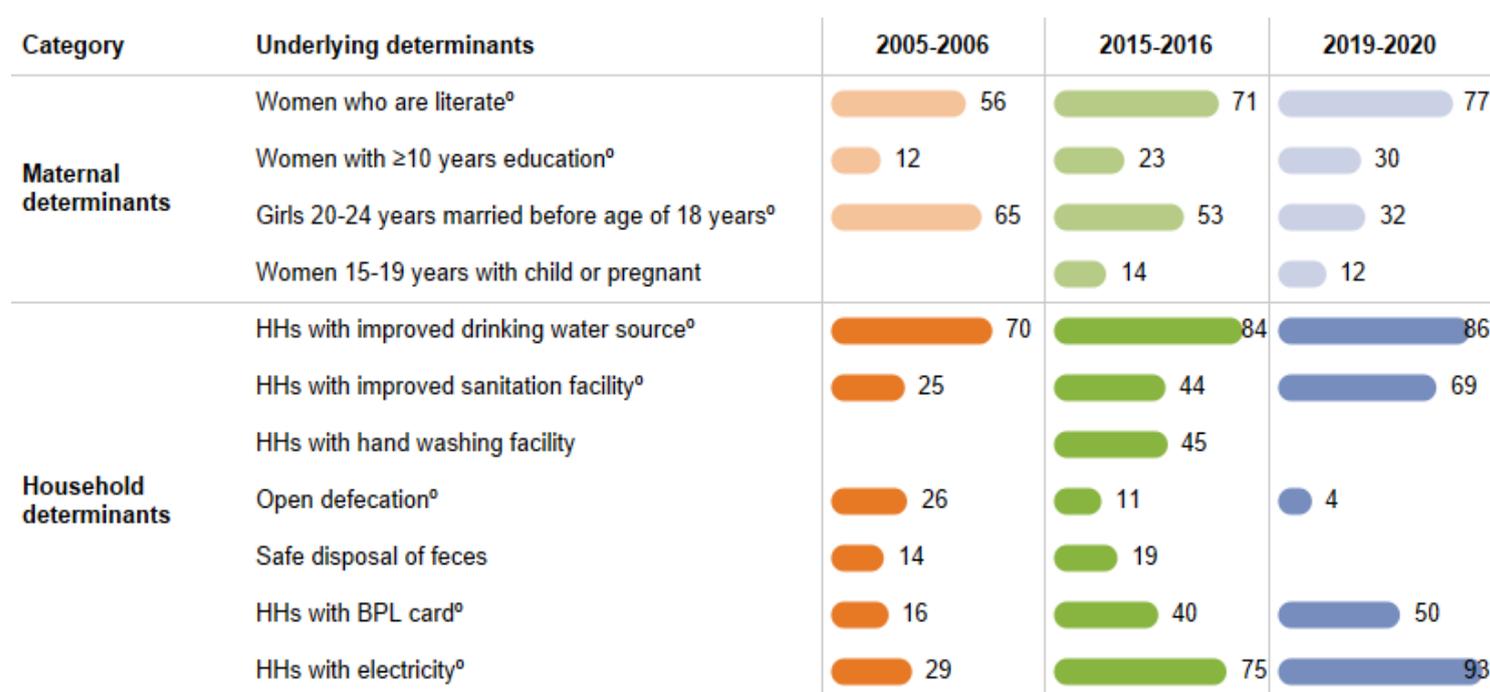
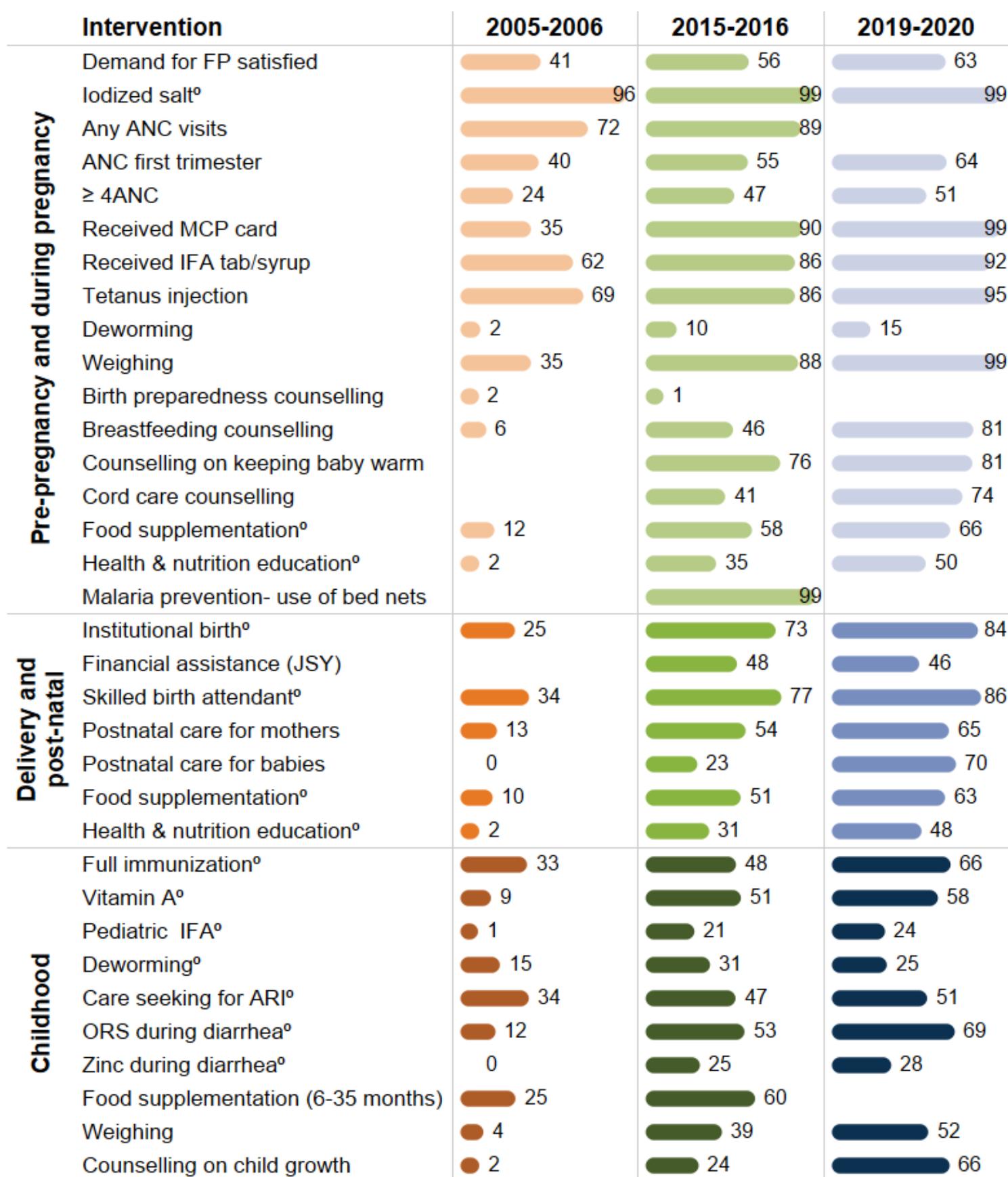


Table 3. Underlying determinants at district-level
2015-2016, 2019-2020

| Category | Underlying determinants | Worst performing districts (pp) | Best performing districts (pp) | Top coverage districts (%) ¹ |
|------------------------|---|---|---|---|
| | | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>2019-2020</i> |
| Maternal determinants | Women who are literate ^o | Baksa:-3.7 Golaghat:-2.0 | Dima Hasao:+17.7 Tinsukia:+17.0 | Dima Hasao:88 Sivasagar: 87 |
| | Women with ≥10 years education ^o | Baksa:-2.1 Udalguri:-1.5 | Dima Hasao:+16.4 Barpeta:+11.9 | Kamrup m ⁴ :49 Sivasagar:47 |
| | Girls 20-24 years married before age of 18 years ^o | Not applicable ⁵ | Kamrup m ⁴ :-38.2 Morigaon:-30.7 | Dhubri:51 S.SMancachar ⁴ : 45 |
| | Women 15-19 years with child or pregnant | Kamrup:+6.2 Kamrup m ⁴ :+2.5 | Goalpara:-13.9 Bongaigaon:-6.9 | Dhubri:22.4 SS Mancachar ⁴ :22 |
| Household determinants | HHs with improved drinking water source ^o | Cachar:-12.9 Morigaon:-4.4 | Chirang:+18.3 Bongaigaon:+16.7 | 3 districts ⁶ :100 |
| | HHs with improved sanitation facility ^o | Not applicable ⁵ | Chirang:+46.6 Goalpara:+34.4 | Sivasagar:82 Jorhat:80 |
| | HHs with electricity ^o | Not applicable ⁵ | Chirang:+26.7 Lakhimpur:+23.8 | Kamrup m ⁴ :99 2 districts ⁷ :98 |

Source: NFHS-3 (2005-2006), NFHS-4 (2015-2016), and NFHS-5 state and district factsheets and state reports (2019-2020).
Note: Underlying determinants are based on the last child data; safe disposal of feces not available in NFHS-5 factsheets (2019-20)/state report and data on HHs with hand washing facility not available in NFHS-3 (2005-06) and NFHS-5 factsheets (2019-20)/state report. Data on open defecation and HHs with BPL card for 2019-2020 are taken from NFHS-5 state reports. ²Prevalence did not increase or decrease in any of the districts. ³The difference is calculated only between districts that are comparable between 2015-2016 and 2019-2020. ⁴Kamrupm: Kamrup metropolitan, SS Mancachar: South Salmara Mancachar. ⁵No declines in any district. ⁶Nalbari, Hojai, Darrang. ⁷Baksa, Chirang.

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



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

^oIndicator comparable between NFHS-3 and NFHS-4 but differs slightly from NFHS-5.

Note 1: Interventions' coverage is based on the last child data.

Note 2: The following information is not available in the NFHS-5 factsheets and state reports (2019-20): receipt of at least one ANC visit, birth preparedness counselling, malaria prevention and food supplementation (6-35m). Information on use of bed nets during pregnancy is not available in NFHS-3 data (2006).

Note 3: Data on food supplementation and health and nutrition education during pregnancy and post-natal care, and weight measurement during childhood and counselling on child growth for 2019-2020 are taken from NFHS-5 state reports.

Note 4: Refer to district dashboard for the inter-district variability in the coverage of interventions.

Intervention coverage at district-level, 2019-2020

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

| District name | Pre-pregnancy | | Pregnancy | | | | | | | | | | | | Delivery & postnatal | | | | | | | | | | Early childhood | | | | | | | | | | | | | |
|-------------------------|-------------------------|--------------|----------------|---------------------|--------|-------------------|--------------|-----------|-------------------|-----------|-----------|--------------------|------------|---------------|---------------------------------|-----------------------|----------------------|------------------------------|-------------------------------------|---------------------|----------------------------|-------------------------|----------------------------|---------------------------|----------------------|------------------------------|-------------------|-----------|----------------|-----------|----------------------|---------------------|----------------------|------------------------------------|-----------|----------------------------|--|--|
| | Demand for FP satisfied | Iodized salt | Any ANC visits | ANC first trimester | ≥4 ANC | Received MCP card | Received IFA | tab/syrup | Tetanus injection | Deworming | Weighting | Birth preparedness | counseling | Breastfeeding | Counseling on keeping baby warm | Cord care counselling | Food supplementation | Health & nutrition education | Malaria prevention- use of bed nets | Institutional birth | Financial assistance (JSY) | Skilled birth attendant | Postnatal care for mothers | Postnatal care for babies | Food supplementation | Health & nutrition education | Full immunization | Vitamin A | Paediatric IFA | Deworming | Care seeking for ARI | ORS during diarrhea | Zinc during diarrhea | Food supplementation (6-35 months) | Weighting | Counseling on child growth | | |
| ASSAM | | 98.8 | 50.7 | 98.7 | 92.4 | 94.5 | 14.5 | | | | | | | | | | | | | 84.1 | 46.1 | 86.1 | 65.3 | 69.9 | | | | 66.4 | 58.2 | | | | | 51.2 | 69.1 | 28.0 | | |
| Baksa | | 98.9 | 56.0 | 99.8 | 91.2 | 95.0 | 9.3 | | | | | | | | | | | | | 89.9 | 47.3 | 92.1 | 65.0 | 70.9 | | | | 70.5 | 55.8 | | | | | 59.0 | | | | |
| Barpeta | | 96.3 | 43.6 | 99.1 | 96.1 | 94.9 | 15.4 | | | | | | | | | | | | | 87.6 | 38.7 | 87.6 | 70.5 | 73.9 | | | | 54.6 | 48.2 | | | | | 64.9 | | | | |
| Biswanath | | 98.0 | 46.5 | 99.3 | 96.4 | 94.6 | 16.3 | | | | | | | | | | | | | 84.3 | 53.5 | 84.6 | 56.5 | 58.1 | | | | 66.2 | 61.4 | | | | | 49.1 | | | | |
| Bongaigaon | | 98.3 | 33.9 | 98.5 | 94.8 | 91.8 | 14.2 | | | | | | | | | | | | | 84.5 | 31.9 | 89.1 | 57.0 | 63.3 | | | | 67.9 | 65.0 | | | | | 50.4 | | | | |
| Cachar | | 98.6 | 32.7 | 98.2 | 92.7 | 90.0 | 19.2 | | | | | | | | | | | | | 79.2 | 49.3 | 80.2 | 57.3 | 61.4 | | | | 70.4 | 67.9 | | | | | 58.7 | 68.6 | 11.8 | | |
| Charideo | | 99.7 | 64.5 | 98.7 | 94.3 | 95.9 | 9.4 | | | | | | | | | | | | | 88.2 | 53.8 | 90.5 | 70.5 | 72.8 | | | | 74.0 | 58.0 | | | | | 33.2 | | | | |
| Chirang | | 98.6 | 56.5 | 99.2 | 92.3 | 96.1 | 13.4 | | | | | | | | | | | | | 83.7 | 39.3 | 82.9 | 59.7 | 63.0 | | | | 71.1 | 63.7 | | | | | 62.4 | | | | |
| Darrang | | 97.4 | 37.5 | 99.0 | 92.9 | 91.1 | 16.7 | | | | | | | | | | | | | 84.4 | 36.0 | 87.0 | 53.2 | 66.3 | | | | 57.1 | 48.2 | | | | | 40.0 | | | | |
| Dhemajii | | 99.1 | 37.6 | 98.2 | 86.8 | 97.0 | 13.2 | | | | | | | | | | | | | 64.2 | 52.6 | 68.9 | 48.4 | 54.5 | | | | 71.6 | 50.6 | | | | 39.7 | 69.5 | 22.9 | | | |
| Dibrugarh | | 99.5 | 75.6 | 99.6 | 97.3 | 94.1 | 5.2 | | | | | | | | | | | | | 93.1 | 53.2 | 95.3 | 82.1 | 87.0 | | | | 83.8 | 56.5 | | | | 56.1 | | | | | |
| Dima Hasao | | 99.4 | 46.9 | 99.2 | 83.9 | 96.8 | 4.1 | | | | | | | | | | | | | 89.5 | 57.0 | 91.9 | 73.8 | 76.8 | | | | 63.6 | 63.3 | | | | 39.9 | | | | | |
| Goalpara | | 99.1 | 44.1 | 98.6 | 93.4 | 96.6 | 14.9 | | | | | | | | | | | | | 92.3 | 43.2 | 94.2 | 73.5 | 80.0 | | | | 70.3 | 57.8 | | | | 50.9 | 84.2 | 27.8 | | | |
| Golaghat | | 98.7 | 65.7 | 100.0 | 94.0 | 97.7 | 8.1 | | | | | | | | | | | | | 90.4 | 59.7 | 92.1 | 73.5 | 83.5 | | | | 72.4 | 61.1 | | | | 54.4 | | | | | |
| Hailakandi | | 97.6 | 43.1 | 100.0 | 94.3 | 96.2 | 35.3 | | | | | | | | | | | | | 83.0 | 67.4 | 84.8 | 68.8 | 70.1 | | | | 68.6 | 80.0 | | | | 45.4 | | | | | |
| Hojai | | 98.9 | 51.3 | 98.3 | 86.1 | 96.2 | 12.6 | | | | | | | | | | | | | 82.1 | 30.9 | 83.5 | 63.9 | 68.4 | | | | 55.5 | 52.1 | | | | 44.7 | | | | | |
| Jorhat | | 98.9 | 67.0 | 99.2 | 89.6 | 97.4 | 6.3 | | | | | | | | | | | | | 96.5 | 41.9 | 97.4 | 81.4 | 85.4 | | | | 69.2 | 50.9 | | | | 56.6 | | | | | |
| Kamrup | | 98.2 | 46.9 | 95.5 | 88.8 | 85.9 | 7.7 | | | | | | | | | | | | | 85.0 | 26.4 | 88.5 | 61.4 | 67.0 | | | | 63.6 | 64.0 | | | | 52.9 | | | | | |
| Kamrup Metropolitan | | 99.7 | 68.9 | 98.3 | 95.5 | 96.3 | 9.7 | | | | | | | | | | | | | 89.1 | 21.5 | 90.1 | 75.6 | 79.9 | | | | 53.6 | 54.9 | | | | 58.8 | | | | | |
| Karbi Anglong | | 99.8 | 63.9 | 96.4 | 89.3 | 90.9 | 5.0 | | | | | | | | | | | | | 74.9 | 53.3 | 78.3 | 56.9 | 61.0 | | | | 64.3 | 44.9 | | | | 55.3 | | | | | |
| Karimganj | | 98.7 | 42.8 | 99.5 | 94.0 | 94.2 | 28.2 | | | | | | | | | | | | | 76.4 | 62.9 | 78.3 | 63.9 | 70.2 | | | | 75.1 | 74.7 | | | | 59.6 | 68.4 | 55.6 | | | |
| Kokrajhar | | 99.6 | 36.9 | 98.4 | 95.4 | 95.8 | 20.2 | | | | | | | | | | | | | 81.9 | 35.0 | 82.0 | 68.3 | 65.5 | | | | 51.1 | 52.6 | | | | 36.6 | | | | | |
| Lakhimpur | | 99.9 | 51.7 | 99.6 | 86.3 | 97.3 | 19.6 | | | | | | | | | | | | | 96.2 | 57.2 | 96.8 | 67.7 | 77.0 | | | | 69.0 | 65.0 | | | | 48.0 | | | | | |
| Majuli | | 99.8 | 72.2 | 98.4 | 92.1 | 97.2 | 6.6 | | | | | | | | | | | | | 90.3 | 62.6 | 93.5 | 73.5 | 73.5 | | | | 78.6 | 62.0 | | | | 56.4 | | | | | |
| Morigaon | | 97.0 | 42.0 | 98.7 | 96.8 | 94.8 | 29.3 | | | | | | | | | | | | | 88.3 | 58.1 | 90.0 | 67.9 | 72.6 | | | | 73.4 | 60.2 | | | | 51.6 | | | | | |
| Nagaon | | 98.7 | 59.4 | 98.3 | 91.2 | 97.1 | 11.3 | | | | | | | | | | | | | 83.7 | 34.9 | 86.7 | 62.0 | 65.3 | | | | 58.2 | 47.9 | | | | 42.5 | 75.4 | 11.7 | | | |
| Nalbari | | 99.4 | 55.9 | 96.9 | 91.2 | 92.8 | 17.0 | | | | | | | | | | | | | 91.8 | 44.0 | 91.4 | 73.8 | 73.2 | | | | 65.5 | 58.4 | | | | 64.1 | | | | | |
| Sivasagar | | 99.8 | 80.9 | 100.0 | 95.7 | 96.5 | 5.3 | | | | | | | | | | | | | 95.3 | 51.4 | 95.6 | 73.8 | 83.4 | | | | 77.6 | 64.9 | | | | 58.3 | | | | | |
| Sonitpur | | 99.4 | 45.5 | 98.5 | 91.4 | 99.2 | 14.2 | | | | | | | | | | | | | 83.5 | 47.2 | 82.8 | 63.5 | 67.4 | | | | 70.9 | 58.7 | | | | 42.6 | | | | | |
| South Salmara Mancachar | | 98.9 | 35.3 | 99.4 | 95.1 | 93.0 | 23.3 | | | | | | | | | | | | | 71.7 | 34.2 | 79.4 | 62.6 | 56.1 | | | | 65.8 | 65.8 | | | | 60.9 | | | | | |
| Tinsukia | | 99.3 | 63.1 | 100.0 | 96.3 | 93.9 | 10.8 | | | | | | | | | | | | | 82.6 | 53.2 | 83.2 | 73.6 | 77.8 | | | | 50.1 | 59.3 | | | | 55.6 | | | | | |
| Udalguri | | 99.3 | 49.8 | 99.6 | 86.2 | 91.0 | 7.4 | | | | | | | | | | | | | 86.2 | 42.9 | 87.9 | 53.1 | 62.9 | | | | 38.3 | 53.2 | | | | 55.6 | | | | | |
| West Karbi Anglong | | 98.9 | 46.7 | 98.7 | 77.7 | 87.6 | 9.6 | | | | | | | | | | | | | 72.5 | 67.3 | 84.5 | 55.7 | 60.5 | | | | 47.9 | 42.1 | | | | 50.7 | | | | | |

Source: NFHS-5 district factsheets and state reports (2019-2020)

Note 1: The following information is not available in the NFHS-5 factsheets and state reports (2019-20): (1) Information on preconception and pregnancy-related indicators including demand for FP satisfied, receipt of at least one ANC visit, weighing, birth preparedness and breastfeeding counselling, counselling on keeping baby warm, cord care counselling, food supplementation, health and nutrition education and malaria prevention; (2) Lactation-related indicators including, food supplementation and health and nutrition education; and (3) early childhood-related indicators including paediatric 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) | Best performing districts (pp) | Top coverage districts (%) |
|--------------------------------|---|---|---|--|
| | | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>Difference between (2019-2020) & (2015-2016)</i> | <i>2019-2020</i> |
| Pregnancy | ANC first trimester | Lakhimpur:-7.7 Chirang:-6.0 | Hailakandi:+28.0 Golaghat:+23.1 | Sivasagar:85 2districts ⁶ :78 |
| | ≥4 ANC visits | Cachar:-18.7 Lakhimpur:-7.3 | Chirang:+15.2 Udalguri:+12.9 | Sivasagar:81 Dibrugarh:76 |
| | Received MCP Card | Not applicable ⁴ | Kamrupm ³ :+16.7 Dima Hasao:+14.1 | 9 districts ⁷ :100 |
| | Tetanus injection | Udalguri:-2.1 | Chirang:+23.9 Goalpara:+19.5 | Sonitpur:99 8 districts ⁸ :97 |
| Delivery and post-natal | Institutional birth ^o | KamrupmL-5.2 | Barpeta:+32.6 2 districts ⁵ :+29.5 | Jorhat:97 Lakhimpur:96 |
| | Skilled birth attendant ^o | Kamrup m ³ :-3.7 Kamrup:-0.7 | Karimganj:+30.1 Dima Hasao:+28.7 | 2 districts ⁹ :97 Sivasagar:96 |
| | Postnatal care for mothers | Udalguri:-8.6 Cachar:-5.6 | Barpeta:+33.9 Hailakandi:+29.5 | Dibrugarh:82 Jorhat:81 |
| | Postnatal care for babies ^o | Not applicable ⁴ | Barpeta:+64.0 Nalbari:+61.0 | Dibrugarh:87 Jorhat:85 |
| Early childhood | Full immunization | Kamrup m ³ :-20.1 Udalguri:-13.1 | Dhemaji:+42.2 Chirang:+30.3 | Dhemaji:90 Dibrugarh:84 |
| | Vitamin A supplementation ^o | Dibrugarh:-9.0 Udalguri:-7.4 | Kokrajhar:+22.7 Dima Hasao:+22.4 | Hailakandi:80 Karimganj:75 |
| | Care seeking for ARI ^o | Lakhimpur:-22.2 Dima Hasao:-18.3 | Karimganj:+32.2 Bongaigaon:+31.4 | Barpeta:65 Nalbari:64 |
| | ORS treatment during diarrhea ^o | Data not available for all districts | | Goalpara:84 Dhubri:70 |
| | Zinc treatment during diarrhea ^o | Data not available for all districts | | Karimganj:56 Goalpara:28 |

Key takeaways

Children: Stunting prevalence declined by 10 percentage points (pp) between 2006 and 2016 and by 1pp between 2016 and 2020. Wasting increased by 3pp between 2006 and 2016 and by 4pp between 2016 and 2020. Underweight declined by 6pp between 2006 and 2016 but increased by 2pp between 2016 and 2020. Anemia declined by 33pp between 2006 and 2016 but increased by 32pp between 2016 and 2020.

Women: Underweight declined by 11 pp between 2006 and 2016 and continued to decline by 8pp between 2016 and 2020. Anemia in non-pregnant and pregnant women declined by 23pp and 27pp, respectively, between 2006 and 2016, but increased by 20pp in non-pregnant and 9pp in pregnant women between 2016 and 2020. Overweight/obesity increased by 5pp between 2006 and 2016 and by 2pp between 2016 and 2020.

Men: Overweight/obesity increased by 8pp between 2006 and 2016 and by 3pp between 2016 and 2020.

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

- **Outcomes:** Stunting (35%) and anemia in children (68%); anemia in non-pregnant (66%) and pregnant (54%) women
- **Immediate determinants:** Early initiation of breastfeeding (49%); adequate diet (8%); 100+ IFA (48%)
- **Underlying determinants:** Women with ≥10 years education (30%)
- **Coverage of interventions:** Health & nutrition education for women (48-50%); Zinc during diarrhea for children (28%)

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) |
| Anemia among non-pregnant women | Percentage of non-pregnant women aged 15-49 who are anemic (<12.0 g/dl) |
| Anemia among pregnant women | Percentage of pregnant women aged 15-49 who are anemic (<11.0 g/dl) |
| Overweight/obesity - children | Percentage of children aged 0-59 months who are overweight i.e., weight-for-height z score > 2SD |
| Overweight/obesity - women | Percentage of men aged 15-54 who are overweight or obese (BMI ≥25.0 kg/m ²) |
| Overweight/obesity - men | Percentage of men aged 15-54 who are overweight or obese (BMI ≥25.0 kg/m ²) |
| 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 ⁵ | Percentage of youngest children 12–23 months of age who were fed breast milk during the previous day |
| Adequate diet | Percentage of youngest children 6–23 months of age who consumed a minimum acceptable diet during the previous day |
| Eggs and/or flesh foods consumption ⁵ | Percentage of youngest children 6–23 months of age who consumed egg and/or flesh food during the previous day |
| Sweet beverage ⁵ | Percentage of youngest children 6–23 months of age who consumed a sweet beverage during the previous day |
| Bottle feeding for infants ⁵ | Percentage of youngest children 0–23 months of age who were fed from a bottle with a nipple during the previous day |
| Women with body mass index <18.5 kg/m ^{2 0} | ¹ Percentage of women aged 15-49 with a youngest child < 5 years who have BMI below normal (BMI <18.5 kg/m ²) ; ² Percentage of women aged 15-49 whose BMI is below normal (BMI <18.5 kg/m ²) |
| Consumed IFA 100+ days | Percentage of mothers aged 15-49 who consumed iron folic acid for 100 days or more during the last pregnancy in last five years preceding the survey |
| Diarrhea in the last two weeks ⁰ | ¹ Percentage of youngest children under age five who had diarrhea in the two weeks preceding the survey; ² Percentage of children under age 5 who had diarrhea in the 2 weeks preceding the survey |
| ARI in the last two weeks ⁰ | ¹ Percentage of youngest children under age five who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey; ² Percentage of children under age five who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey |
| Underlying determinants | |
| Women who are literate ⁰ | ¹ Percentage of women aged 15-49 with a birth in five years preceding the survey who are literate i.e., those who completed standard 6 or higher and can read a whole sentence; ² Percentage of women aged 15-49 who are literate i.e., those who completed standard 9 or higher and can read a whole sentence or part of a sentence. |
| Women with ≥10 years education ⁰ | ¹ Percentage of women aged 15-49 with a birth in five years preceding the survey with 10 or more years of schooling; ² Percentage of women aged 15-49 with 10 or more years of schooling |
| Girls 20-24 years married before age of 18 years ⁰ | ¹ Percentage of women aged 20-24 years with a birth in five years preceding the survey who were married before age 18 years; ² Percentage of women aged 20-24 years who were married before age 18 years |
| Women 15-19 years with child or pregnant | Percentage of currently married women aged 15-49 who had their first birth before age 20 years and in the five years preceding the survey |
| HHs with improved drinking water source ⁰ | ¹ Percentage of youngest children under age 5 living in household that use an improved source of drinking water; ² Population living in households that use an improved sanitation facility |
| HHs with improved sanitation facility ⁰ | ¹ Percentage of youngest children under age 5 living in household that uses improved toilet facility; ² Population living in households that use an improved sanitation facility |
| HHs with hand washing facility ⁵ | Percentage of youngest children under age 5 living in household that had soap and water for washing hands |
| Open defecation [@] | Percentage of youngest children under age 5 living in household that has no toilet facility/defecates in open |
| Safe disposal of feces ⁵ | 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. ⁵ Indicator not available in NFHS-5 factsheets/state reports ⁰Indicator 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 [®] Iodized salt ⁰ Any ANC visits [§] ANC first trimester | Percentage of currently married women aged 15-49 with demand for family planning satisfied by modern methods ¹ Percentage of women aged 15-49 living in HHs that use iodized salt; ² Percentage of households using iodized salt Percentage of women aged 15-49 with a live birth in the five years who received at least one ANC for the last birth Percentage of women (15-49 years of age) attended by any provider during the first trimester of pregnancy that led to the birth of the youngest child in the last 2 years |
| ≥ 4ANC | Percentage of mothers aged 15-49 who had at least 4 antenatal care visits for last birth in the 5 years before the survey |
| Received MCP card | Percentage of mothers who registered last pregnancy in the 5 years preceding the survey for which she received a Mother and Child Protection (MCP) card |
| Received IFA tab/syrup [®] | Percentage of women who received IFA (given or purchased) tablets during the pregnancy for their most recent live birth in the 5 years preceding the survey |
| Tetanus injection | Percentage of women whose last birth was protected against neonatal tetanus (for last birth in the five years preceding the survey) |
| Deworming- pregnancy [®] | Percentage of women who took an intestinal parasite drug during the pregnancy for their most recent live birth in the 5 years preceding the survey |
| Weighing- pregnancy [®] | Percentage of women aged 15-49 with a live birth in the five years preceding the survey who were weighed during ANC for the last birth |
| Birth preparedness counselling [§] | Percentage of women who had at least one contact with a health worker in the three months preceding the survey and were counselled on birth preparedness; calculated among women aged 15-49 who gave birth in the five years preceding the survey |
| Breastfeeding counselling [®] | Percentage of women who met with a community health worker in the last three months of pregnancy and received advice on breastfeeding (for the last pregnancy in the five years preceding the survey) |
| Counselling on keeping baby warm [®] | Percentage of women who met with a community health worker in the last three months of pregnancy and received advice on keeping the baby warm for their most recent live birth in the five years preceding the survey |
| Cord care counselling [®] | Percentage of women who met with a community health worker in the last three months of pregnancy and received advice on cord care for their most recent live birth in the five years preceding the survey |
| Food supplementation - pregnancy [®] | ¹ Percentage of youngest children under age 5 whose mother received supplementary food from AWC during pregnancy; ³ Among children under 6 years, percentage whose mother received specific benefits from AWC during pregnancy: supplementary food |
| Health & nutrition education – pregnancy [®] | ¹ Percentage of mothers who received health and nutrition education from an Anganwadi Centre (AWC) during last pregnancy in the five years preceding the survey; ³ Among children under 6 years, percentage whose mother received specific benefits from AWC during pregnancy: health and nutrition education |
| Malaria prevention- use of bed nets [§] | Percentage of women who used mosquito net during the pregnancy for their most recent live birth in the 5 years preceding the survey |
| Institutional birth ⁰ | ¹ Percentage of women aged 15-49 who gave birth in health/institutional facility for their most recent live birth in the 5 years preceding the survey; ² Percentage of live births to women aged 15-49 in the five years preceding the survey that took place in a health/institutional facility |
| Financial assistance (JSY) [®] | Percentage of women who received financial assistance under JSY for their most recent live birth that took place in institutional facility in the 5 years preceding the survey |
| Skilled birth attendant ⁰ | ¹ Percentage of women whose last delivery was attended by a skilled health personnel for their most recent live birth in the 5 years preceding the survey; ² Percentage of births attended by skilled health personnel for births in the 5 years before the survey |
| Postnatal care for mothers | Percentage of mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery for their most recent live birth in the five years preceding the survey |
| Postnatal care for babies | Percentage of children who received postnatal care from a doctor /nurse /LHV /ANM /midwife /other health personnel within 2 days of delivery for last birth in the 5 years before the survey |
| Food supplementation – postnatal [®] | ¹ Percentage of youngest children under age 5 whose mother received supplementary food from AWC while breastfeeding; ³ Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: supplementary food |
| Health & nutrition education – postnatal [®] | ¹ Percentage of youngest children under age 5 whose mother received health check-ups from AWC while breastfeeding; ³ Among children under 6 years, percentage whose mother received specific benefits from AWC while breastfeeding: health and nutrition education |
| Full immunization ⁰ | ¹ Percentage of youngest living children aged 12-23 months fully vaccinated based on information from either vaccination card or mother's recall; ² Percentage of children aged 12-23 months fully vaccinated based on information from either vaccination card or mother's recall |
| Vitamin A – early childhood ⁰ | ¹ Percentage of youngest children aged 6-59 months who received Vitamin A supplementation in the last 6 months preceding the survey; ² Percentage of children aged 9-35 months who received a vitamin A dose in the last 6 months preceding the survey |
| Pediatric IFA ^{0®} | Percentage of youngest children aged 6-59 months who received iron supplements in the past 7 days preceding the survey |
| Deworming – early childhood ^{0®} | Percentage of youngest children aged 6-59 months who received deworming tablets in the last 6 months preceding the survey |
| Care seeking for ARI ⁰ | ¹ Percentage of youngest children under age 5 years with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider; ² Percentage of children under age 5 years with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider |
| ORS during diarrhea ⁰ | ¹ Percentage of youngest children under age 5 years with diarrhea in the 2 weeks preceding the survey who received oral rehydration salts (ORS); ² Percentage of children under age 5 years with diarrhea in the 2 weeks preceding the survey who ORS |
| Zinc during diarrhea ⁰ | ¹ Percentage of youngest children under age 5 years with diarrhea in the 2 weeks preceding the survey who received zinc; ² Percentage of children under age 5 years with diarrhea in the 2 weeks preceding the survey who received zinc |
| Food supplementation (children 6-35 months) [§] | Percentage of youngest children aged 6-35 months who received food supplements from AWC in the 12 months preceding the survey |
| Weighing – early childhood [®] | Percentage of youngest children under age 5 who were weighed at AWC in the 12 months preceding the survey |
| Counselling on child growth [®] | Percentage of youngest children under age 5 whose mother received counselling from an AWC after child was weighed in the 12 months preceding the survey |

[^] Indicator not available in NFHS-3. [§] Indicator not available in NFHS-5 factsheets/state reports. [®] Indicator not available in NFHS-5 factsheets but available in NFHS-5 states reports. ⁰ Indicator comparable between NFHS-3 and NFHS-4 but differs slightly from NFHS-5.

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

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SUGGESTED CITATION

Singh, N., R. Avula, S.K. Singh, R. Sarwal, N. Bhatia, R. Johnston, W. Joe, E. Sarswat, P. Menon, and P.H. Nguyen. 2021. *State Nutrition Profile: Assam*. POSHAN Data Note 40. 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, 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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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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