



2026

ETHIOPIA SYNTHESIS REPORT

Analysis of Reproductive, Maternal, Newborn, Child and Adolescent Health Indicators for 2020-2025



Countdown to 2030 in partnership with Ethiopia's Ministry of Health, Global Financing Facility, WHO, WAHO & UNICEF

#CAM2026



Team Members

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KEY FINDINGS

1. Health facility data quality assessment: numerators and denominators

NUMERATORS: Routinely reported health facility data are a key source of information for monitoring health indicators. These data, submitted by health facilities, capture service delivery events such as immunizations administered, antenatal care visits, institutional deliveries, and live births attended. As with any routine data system, ensuring data quality is essential. Prior to analysis, the data are systematically assessed for reporting completeness, extreme outliers, and internal consistency. Where necessary, appropriate data quality adjustments are applied to improve the reliability and validity of the estimates used for health statistics and program monitoring.

Summary of reported health facility data quality, DHIS2, 2020-2025

Data Quality Metrics		2020	2021	2022	2023	2024	2025
1. Completeness of monthly facility reporting (mean of ANC, delivery, immunization)							
1a	% of expected monthly facility reports (national)	89	86	86	88	90	93
1b	% of regions with completeness of facility reporting >= 90	59	54	54	52	77	79
1c	% of regions with no missing values for the 4 forms	83	83	83	83	89	89
2. Extreme outliers (mean of ANC, delivery, immunization)							
2a	% of monthly values that are not extreme outliers (national)	100	100	100	100	100	99
2b	% of regions with no extreme outliers in the year	90	97	95	97	90	84
3. Consistency of annual reporting							
3a	Ratio anc1/penta1	1.08	1.05	1.05	1.05	1.11	1.08
3b	Ratio penta1/penta3	1.07	1.10	1.08	1.08	1.08	1.06
3c	% Regions with anc1/penta1 in expected ranged	71	69	77	54	86	79
3d	% Regions with penta1/penta3 in expected ranged	100	100	100	100	93	100
4	Annual data quality score	85	84	85	82	89	89

Interpretations

Overall Quality Trend: Data quality improved gradually from 2020 to 2025 (rising from 84% to 89% overall), despite a sharp, temporary drop to 82% in 2023.

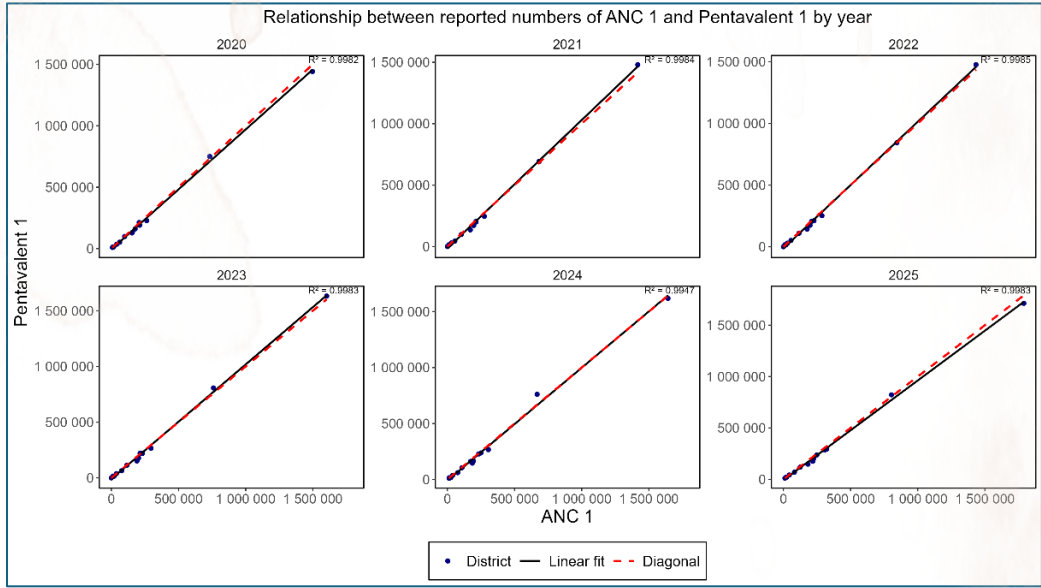
Reporting Completeness: Facility report submissions rose steadily from 89% to 93%. The share of districts achieving 90% completeness increased from a 59% to 79% by 2025.

Data Accuracy & Internal Consistency: % Regions with penta1/penta3 within the expected range was 100% in all the years. However, % Regions with anc1/penta1 within the expected range was low in 2021 and 2023.

Challenges: Regions free of extreme outliers dropped from 97% in 2021 to 84% in 2025. Additionally, % of regions ANC1/Penta1 with in the expected range was low and uneven over the years

Recommendations: Strengthen completeness of facility reporting and consistency between related data elements among regions.

The figure below shows high internal consistency between key indicators: The relationship between related service indicators remained highly stable and internally consistent between 2020 and 2025. This is evidenced by the Penta1/Penta3 ratio consistently remaining close to its expected value of 1.06–1.10, alongside a nearly perfect, strong linear correlation (R 2 0.99) between reported numbers of ANC 1 and Pentavalent 1 across all years)

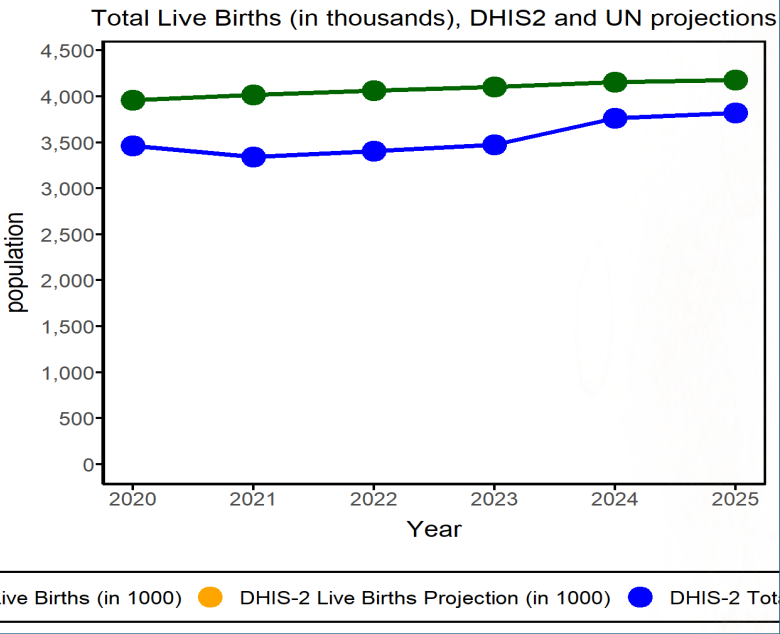


- Reporting rate:** The reporting rate improved over the years. Percentage of regions with low reporting rate has improved over the years, with OPD incompleteness getting reduced from 64% in 2020 to 21% in 2025, vaccination reporting incompleteness has improved from 50% in 2020 to 21% in 2025.

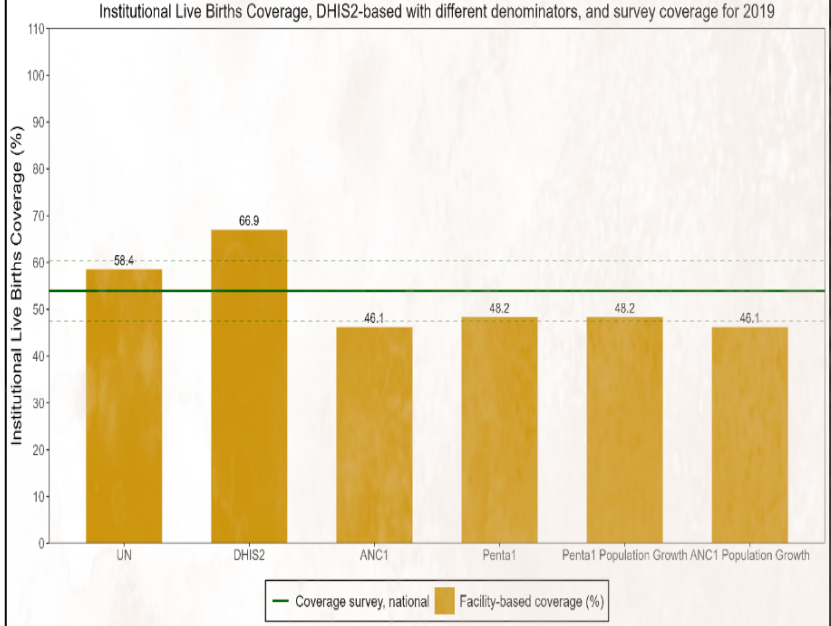


DENOMINATORS: Service coverage is defined as the population who received the service (numerator) divided by the population who need the services: (the denominator). We test four options for denominator measures using institutional live births and Pent-3 immunization coverage. The quality of the population projections in DHIS2 is assessed through consistency over time and comparison with the UN projections. Two denominators are also derived using near universal service such as ANC-1 and Penta-1. The most plausible is identified for use to generate other statistics. For population level coverage estimates, ANC1-derived and Penta-1 derived denominators were used to estimate population-level coverage.

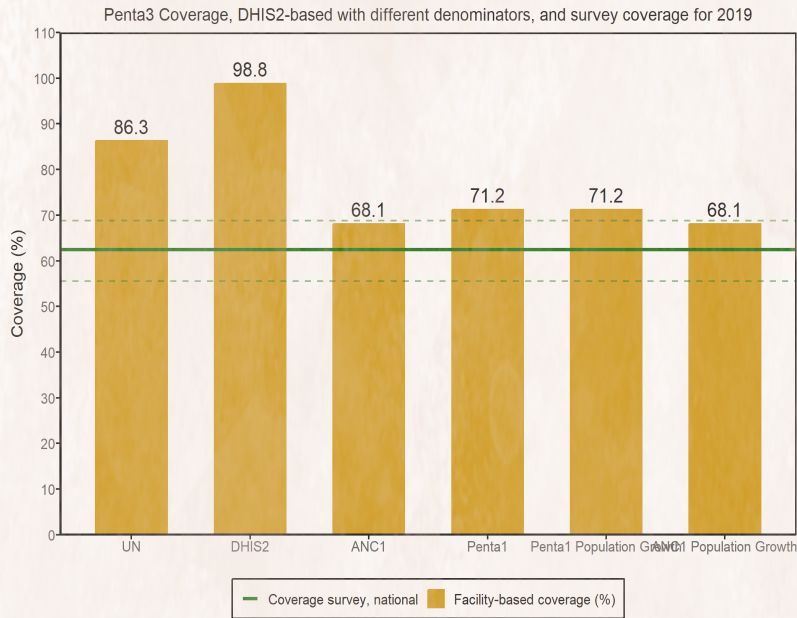
Total Livebirths



Institutional Deliveries



Penta 3



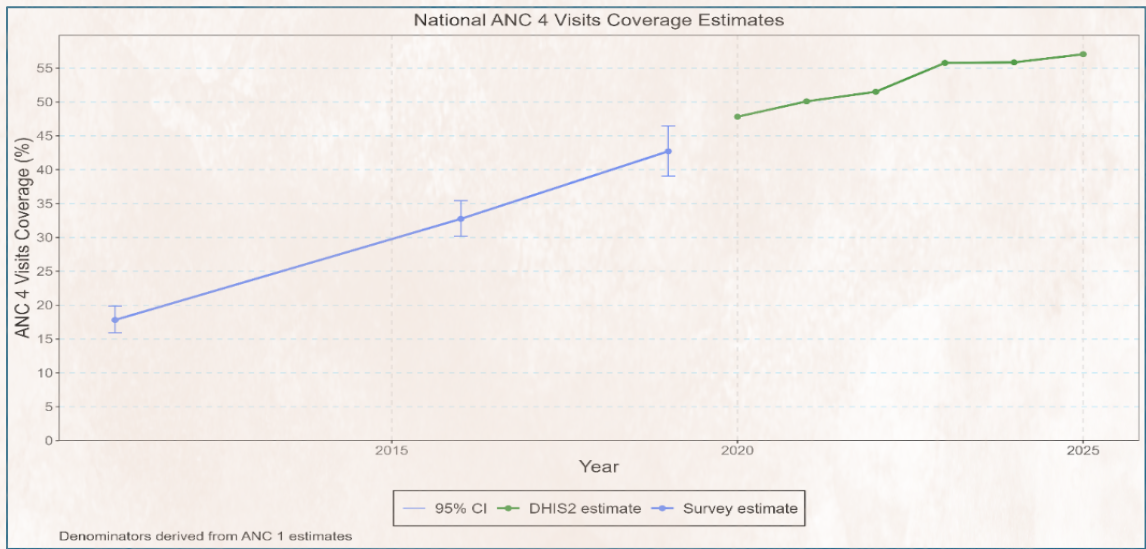
Interpretations

- The total live birth projections show steady growth, with DHIS2 estimates slightly lower than UN figure. This trend indicates an improvement in the accuracy of DHIS2 live birth estimates, reflecting refined methodologies or better data assimilation over time.
- Overall, the coverage using DHIS2 projection is high, which is above the upper range of survey value. For Penta 3 coverage estimation, the ANC1 Population Growth denominators performed best, as their coverage estimates (68.1%) are closest to the independent national coverage survey benchmark (62.5%).
- For institutional delivery coverage estimate, ANC1 derived denominator is selected as the coverage is closer to the survey estimate.
- For ANC4 coverage estimation, the Penta1 and the penta1population derived coverage is close to the survey estimate. ANC1 and ANC1 Population growth-based denominator selected for the maternal health indicators, such as ANC4+, institutional delivery, postnatal care coverage estimations. The Penta1 derived and Penta1 population growth denominator is recommended for child health services such as immunization coverage.

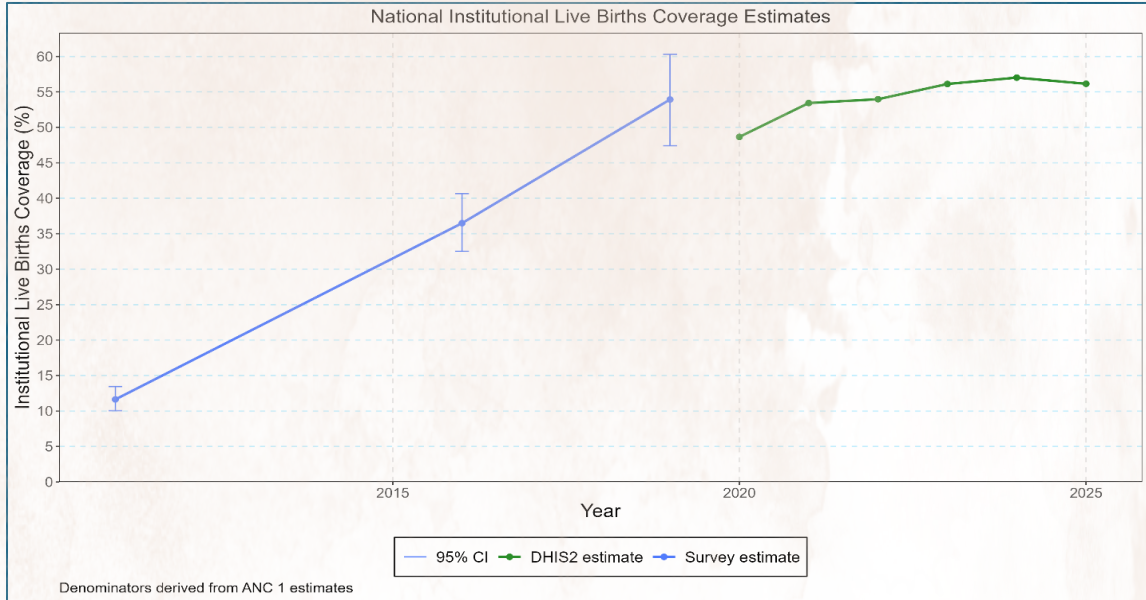
2. National coverage trends: facility data and surveys

Antenatal care: ANC4, ANC early visit, first trimester of pregnancy

ANC 4 coverage



Institutional delivery



Interpretation

Data consistency: Trend alignment between the survey and ANC-1 derived sources is strong, as both household surveys and routine DHIS2 data show consistency, with an overall increase in ANC4 coverage over time. coverage remains systematically higher than survey estimates.

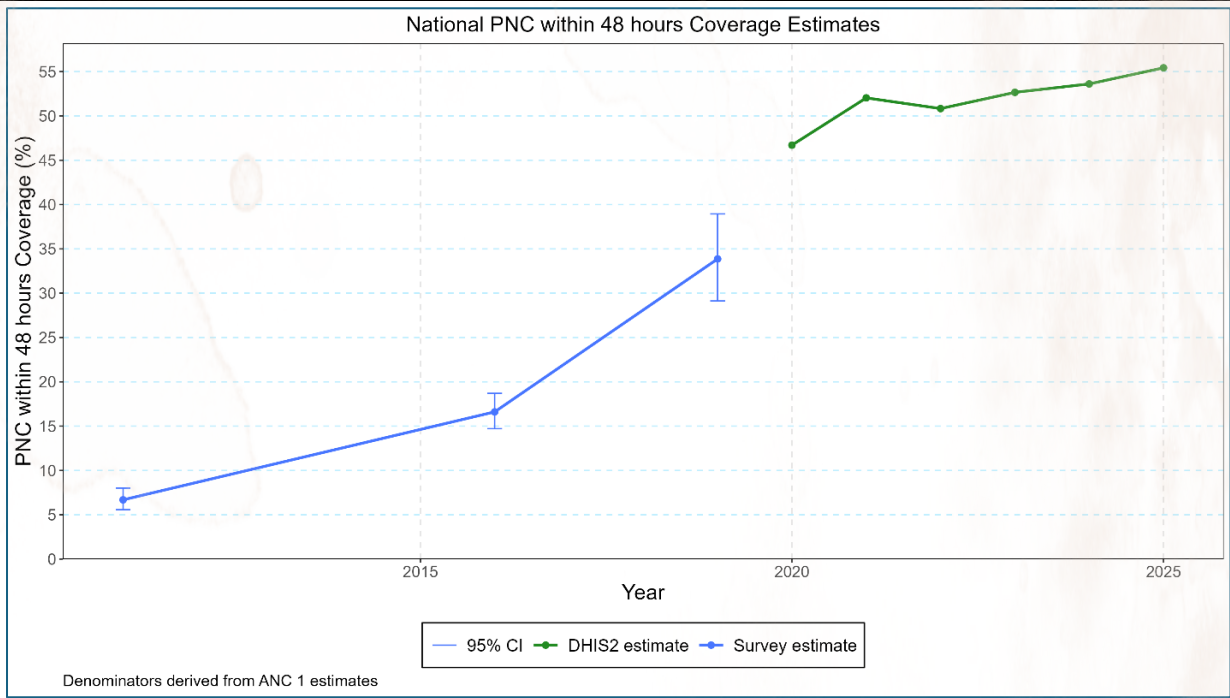
Plausibility of Levels and Trends: The observed upward trajectory is highly plausible. The gradual expansion in routine estimates (Using ANC1 derived denominator)—increased steadily from 48% in 2020 to 57% in 2025—represents a realistic growth pattern. The accelerated progress captured after 2022 points to a plausible combination of expanding maternal health service coverage and ongoing data quality improvements within the routine health information system.

Institutional delivery

Data Consistency: As visualized in in the figure, the alignment between household surveys and routine DHIS2 data estimate is strong in both direction and magnitude. The 2019 survey estimate (~54%) connects smoothly with the DHIS2 trend from 2021 onward. Utilizing an ANC1-derived denominator substantially narrows discrepancies compared to expected pregnancy estimates, providing a highly comparable and reliable baseline for routine monitoring.

Plausibility of Levels and Trends The long-term upward trajectory followed by recent stabilization is highly plausible. The historical rise from 12% in 2012 to 54% in 2019 reflects intensive national investments in primary healthcare and skilled birth attendance. The plateau observed in the DHIS2 data after 2021—stabilizing around 56% to 57%—accurately represents a realistic service plateau where further coverage gains become incremental.

Postnatal care

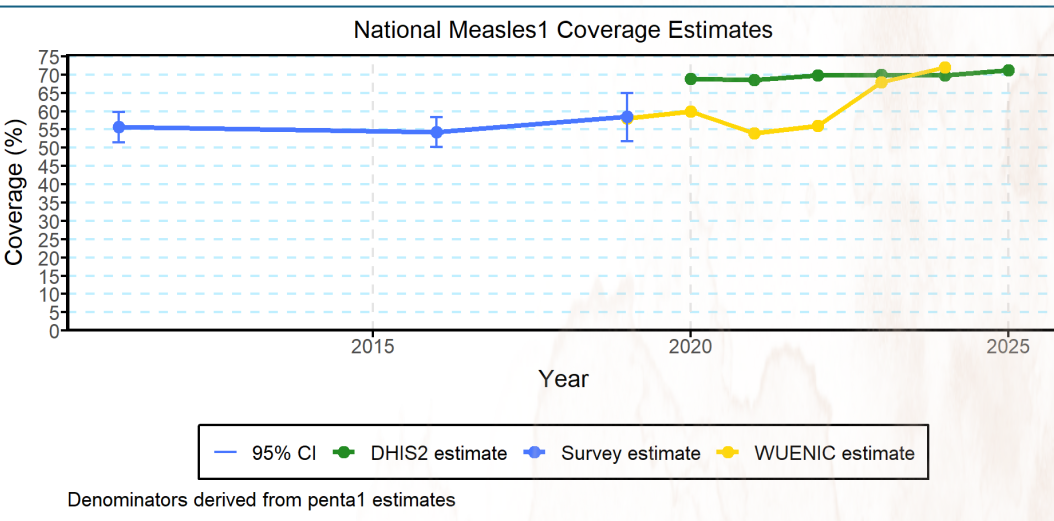
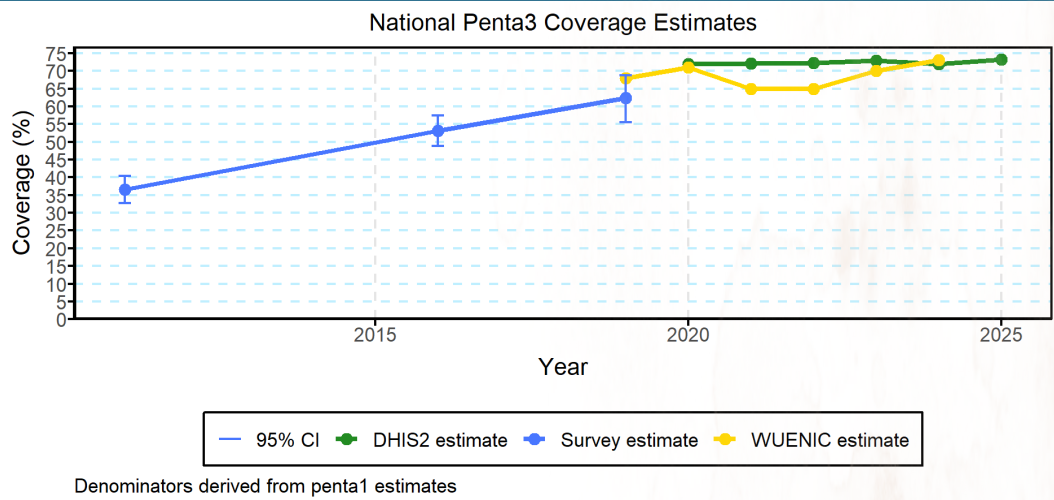


Interpretations

Data Consistency: The figure showed the household surveys and routine DHIS2 coverage (ANC1 derived) exhibit good consistency in trend direction, tracking a shared upward trajectory in early postnatal care coverage. Routine DHIS2 estimates remain systematically higher than survey estimates by a moderate 13 to 18 percentage points. However, this discrepancy is significantly smaller than the 25 to 35 percentage point gap produced by expected-pregnancy denominators. Utilizing an ANC1-derived denominator substantially reduces estimation bias, markedly improving convergence and comparability between routine facility tracking and population-based surveys.

Plausibility of Levels and Trends The observed coverage levels and trends are highly plausible. The historical progress captured by surveys—climbing from 7% in 2012 to 34% in 2019—aligns logically with national initiatives to expand institutional delivery rates and strengthen the maternal care continuum. The routine DHIS2 trend from 2020 onward reflects a realistic, steady growth pattern before stabilizing around 53% to 55% by 2025. This gradual deceleration is expected at higher coverage levels, and the absence of abrupt annual fluctuations further supports the credibility and reliability of the adjusted routine data.

Immunization: Penta 3, Measles 1



Interpretations

Data Consistency Across Sources

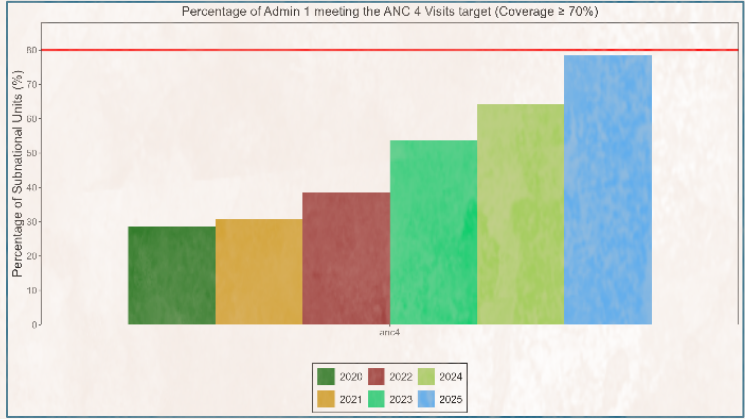
- Historical survey coverage:** Prior to 2019, survey trends differed between the vaccines. Penta3 showed a clear historical increase from 36% to 62%, while Measles 1 remained relatively stable, hovering between 54% and 58%.
- For both antigens, using a penta1-derived denominator in DHIS2 establishes a highly stable routine baseline from 2020 to 2025, tracking at 72%–73% for Penta3 and 69%–71% for Measles 1.
- The WUENIC estimates showed a fluctuation:** Both WUENIC trends show a temporary drop in 2021, falling to 65% for Penta3 and 54% for Measles 1. However, by 2024, WUENIC estimates for both vaccines rebound sharply and achieve complete convergence with routine DHIS2 data.

Plausibility of Levels and Trends

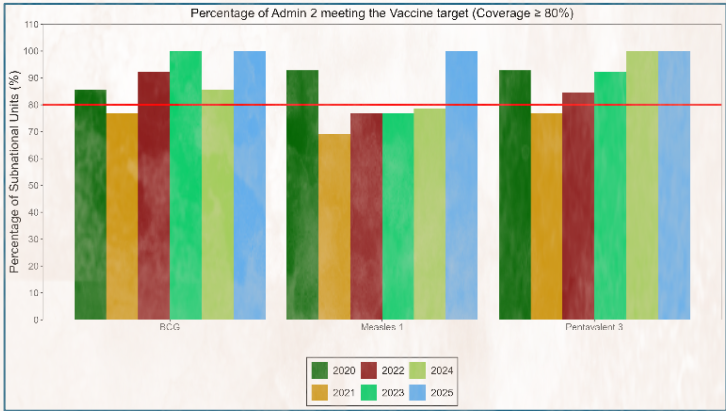
- The long-term expansion and subsequent plateau for Penta3, alongside the flat-to-gradual upward trend for Measles 1, represent highly plausible systemic patterns.
- Steady historical progress reflects sustained investments in child immunization infrastructure, while the shared 2021–2022 drop realistically captures known global and national health service disruptions.
- Evidence of successful recovery:** The post-disruption rebounds in WUENIC estimates point to effective, period-specific accelerated catch-up campaigns.
- The tight convergence of WUENIC and DHIS2 trends by 2024 lends strong credibility to current national coverage baselines, firmly establishing Penta3 at approximately 73% and Measles 1 at around 70%.

Percent of districts achieving high coverage targets

ANC 4



Vaccination



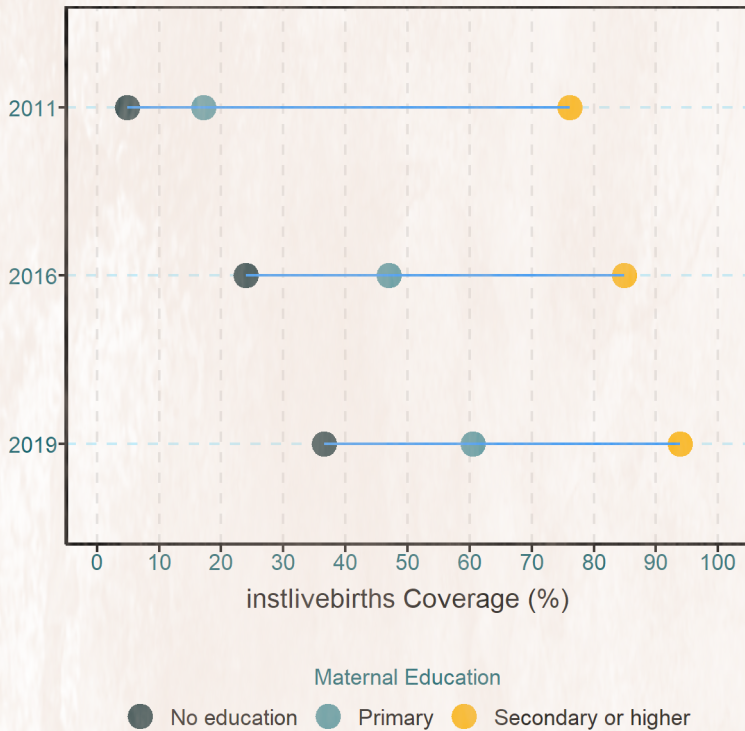
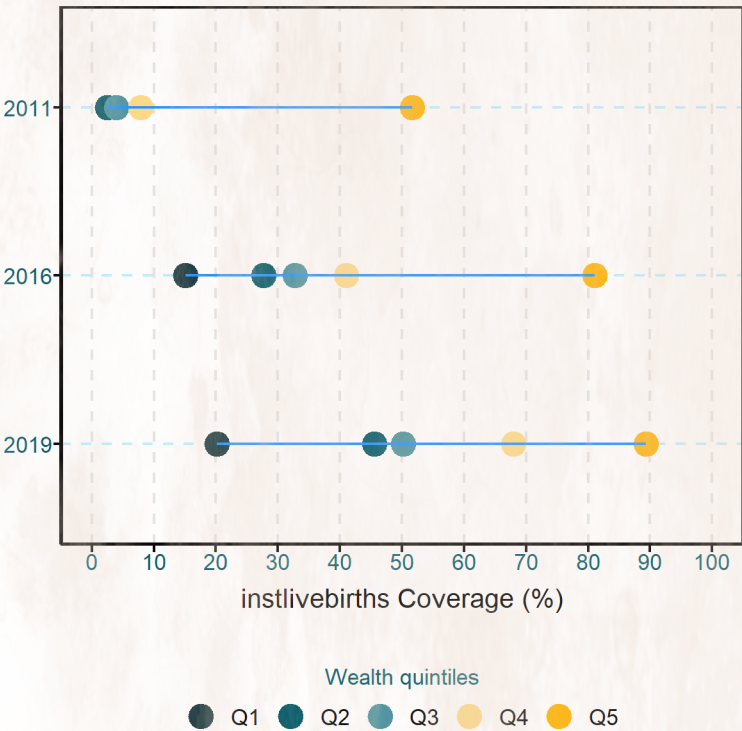
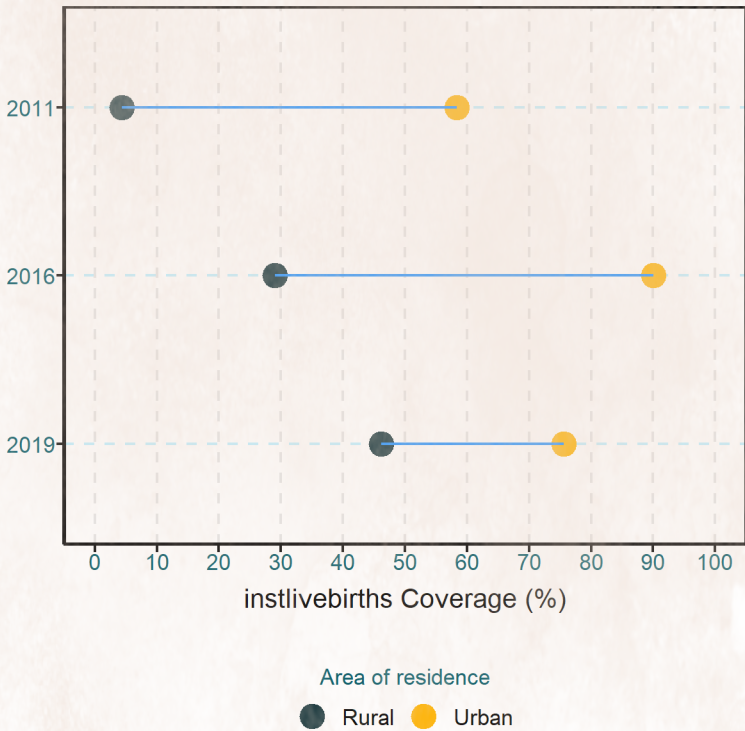
Interpretations

- The maternal health coverage showed that regional success rates improved significantly between 2020 and 2025. Regions meeting the ANC4+ target (80%) rose from 29% to 79%, while those hitting the institutional delivery target increased from 29% to 50%.
- Performance against the vaccination target also saw long-term gains. Between 2020 and 2025, the percentage of regions achieving the target (80%) grew from 86% to 100% for BCG, and from 93% to 100% for both Penta3 and Measles1.
- Despite improved coverage in 2024 and 2025, the % of regions meeting vaccination targets dipped between 2021 and 2024, a decline largely attributed to regional conflicts.

3. Equity

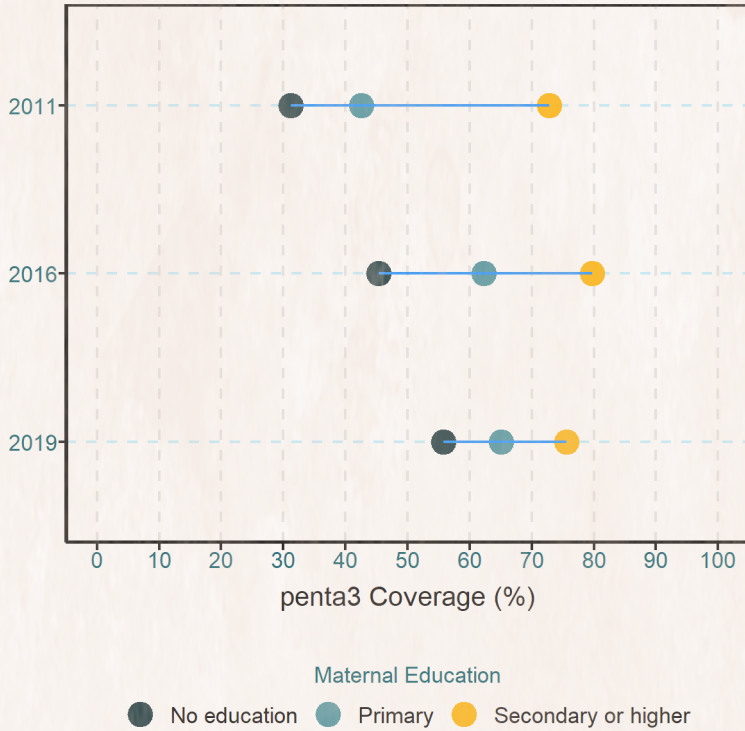
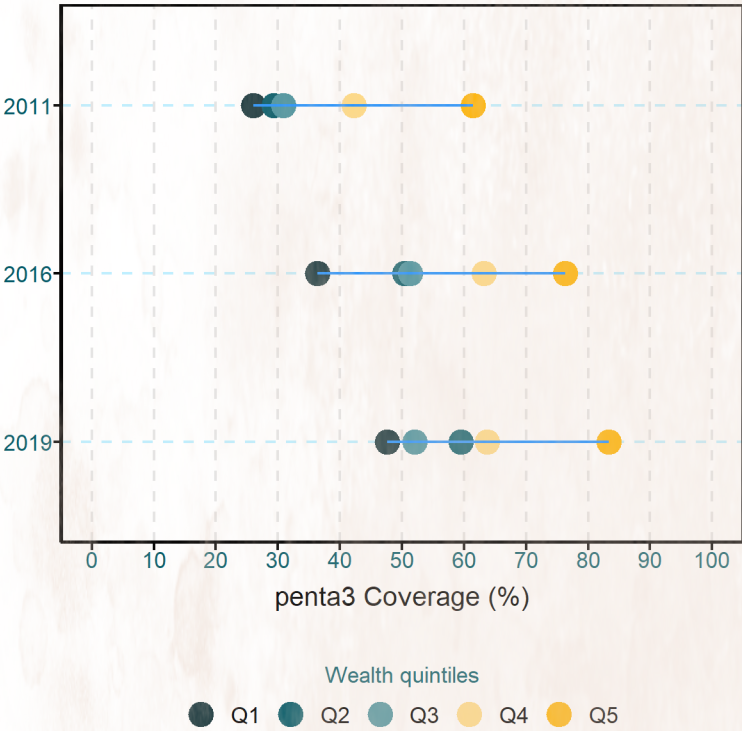
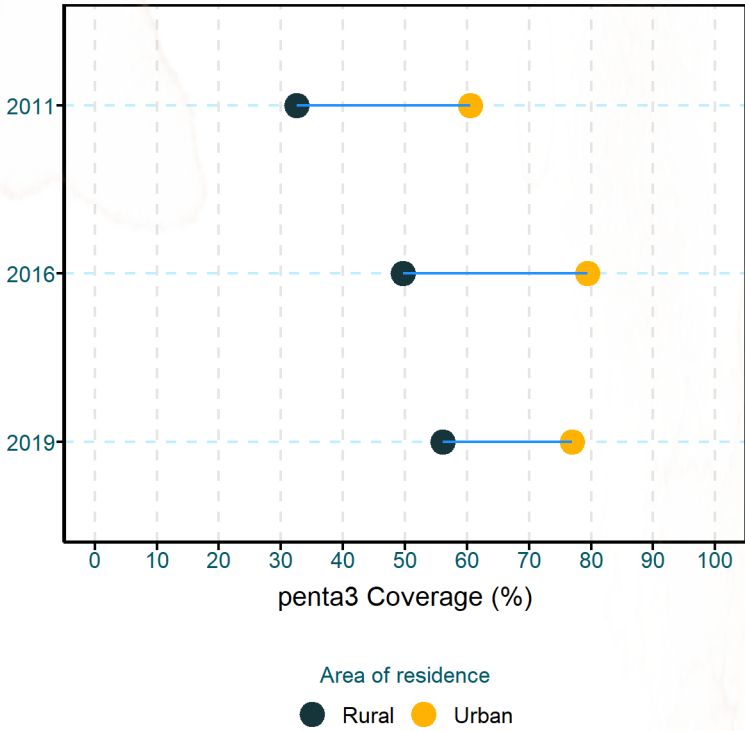
Equity by wealth, education, rural-urban residence (from surveys)

Institutional Deliveries



- Area of Residence (Rural vs. Urban):** Rural populations are systematically left behind in a concentrated binary inequality that initially widened but narrowed by 2019 due to inversely paced changes (rural coverage grew while urban coverage recently declined), suggesting a need for targeted spatial strategies like mobile clinics and improved rural transport to permanently close the gap.
- Wealth Quintiles (Q1 Poorest to Q5 Richest):** The poorest quintiles are consistently left behind as inequality shifted from being heavily concentrated at the top in 2011 to a strict linear gradient by 2019, with the overall absolute gap widening significantly because wealthier groups improved at a much faster pace, necessitating financial interventions like out-of-pocket fee removals or maternal voucher schemes.
- Maternal Education:** Mothers with no education remain systematically left behind in a persistent, linear pattern of inequality where, despite all subgroups experiencing increased coverage over time, the massive absolute gap has remained largely unchanged, highlighting the need to integrate targeted health literacy and highly visual birth-preparedness campaigns into maternal care.

Pentavalent 3rd Dose

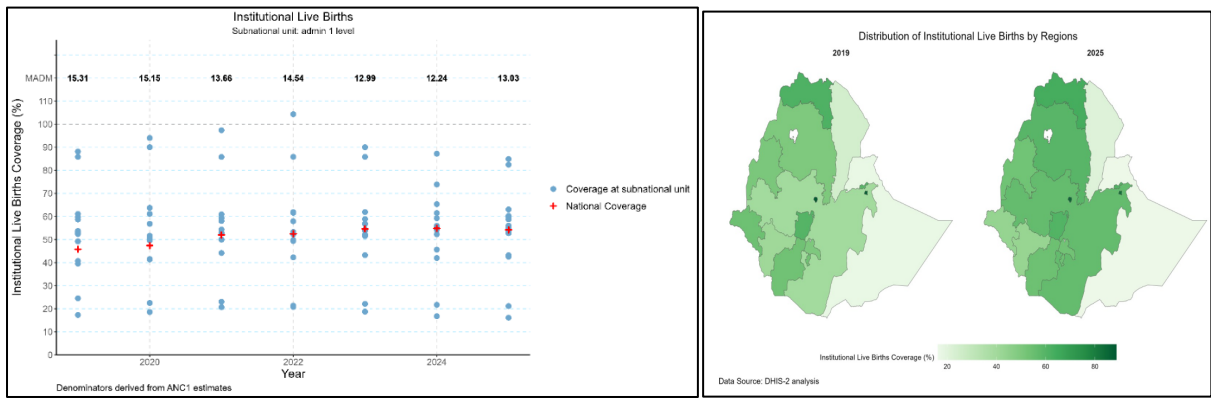


Interpretations

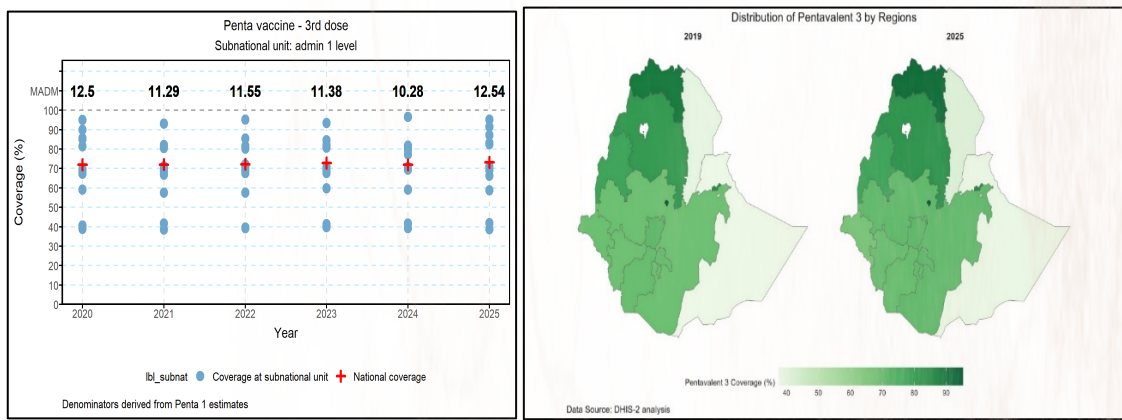
- Area of Residence (Rural vs. Urban):** Rural populations are systematically left behind by a persistent binary gap that widened slightly between 2011 and 2016 but ultimately narrowed by 2019 as rural coverage continued a steady upward climb while urban coverage slightly plateaued and dipped, suggesting a need for strategies like mobile immunization clinics and decentralized cold-chain infrastructure to fully bridge the remaining geographic divide.
- Wealth Quintiles (Q1 Poorest to Q5 Richest):** The poorest quintile (Q1) is consistently left behind, with the pattern of inequality shifting from a heavy concentration at the bottom in 2011 (where Q1–Q3 were clustered together) to a more evenly distributed linear gradient by 2019; while all groups experienced positive progress and kept the absolute richest-to-poorest gap relatively stable over time, targeted interventions like tracking drop-outs via community health networks and removing indirect costs for low-income families are required to accelerate Q1's progress.
- Maternal Education:** Children of mothers with no education are systematically left behind within a clear, linear inequality gradient where higher education levels correspond directly to higher vaccination rates; however, this inequality significantly narrowed over time due to varying paces of change, as the "No education" group achieved continuous catch-up growth while the "Secondary or higher" group slightly declined between 2016 and 2019, highlighting the effectiveness of sustaining progress through localized, visual, and language-accessible community awareness campaigns.

Geographical inequalities: Health facility data

Institutional Deliveries



Pentavalent 3rd Dose



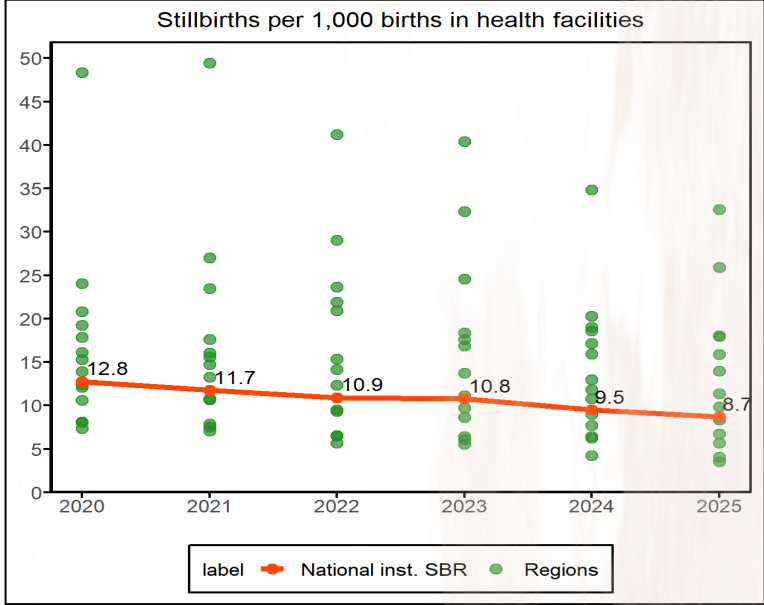
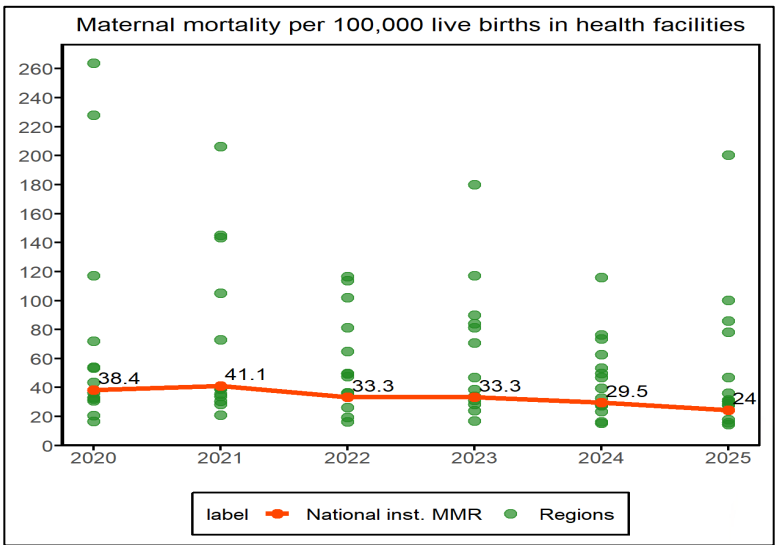
Interpretations

- National Trajectory:** National Penta 3 coverage remained relatively stable between 2020 and 2025 (approximately 68–70%), indicating little change in overall immunization coverage over the six-year period. National institutional live birth coverage showed a gradual improvement from approximately 47% in 2020 to about 57% in 2025, indicating steady progress in the utilization of facility-based delivery services.
- Subnational Divergence:** Substantial subnational variation persisted, with coverage ranging from about 40% to over 90% across regions, highlighting persistent geographic inequities in immunization service delivery. For institutional delivery, coverage ranges from below 20% to over 90%, reflecting substantial inequities in access to and
- Peak Disparity:** The spread of coverage across subnational units changed little over time (MADM: 10.3–12.5 percentage points), suggesting that disparities between higher- and lower-performing areas have remained largely unchanged and require targeted interventions. For institutional delivery, MADM ranged from 12.2 to 15.3 percentage points, suggesting that while national coverage improved, differences between high- and low-performing subnational units changed little over time.

4. Institutional mortality

Institutional Mortality trends (iMMR, iSBR)

iMMR



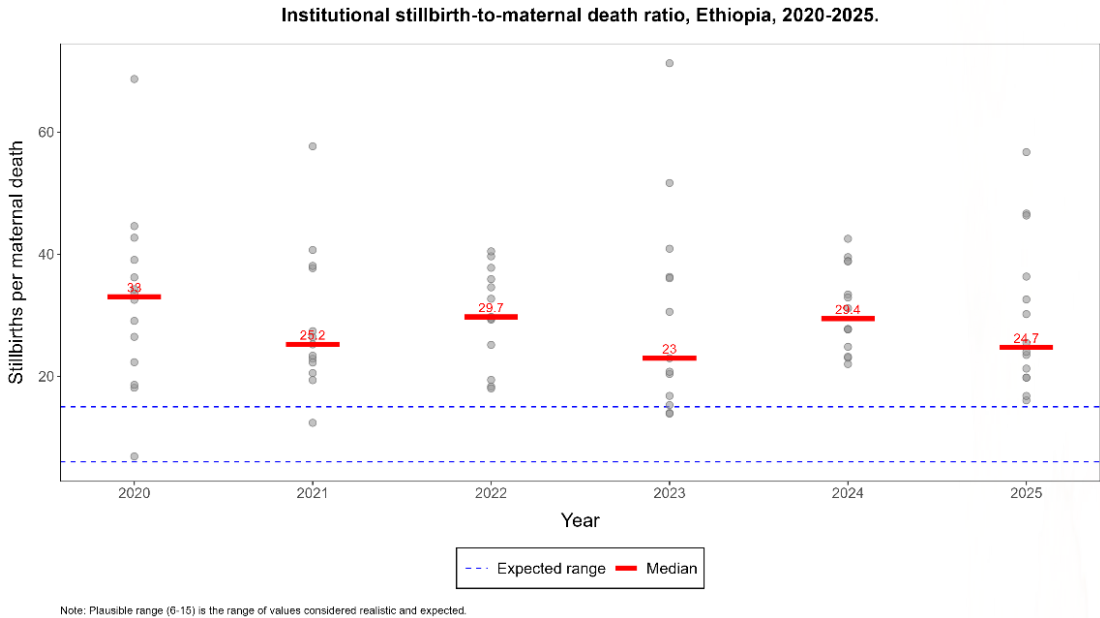
- Trend:** Between 2020 and 2025, the national iMMR has declined from 38.4 to 24.5 per 100,000 live births, indicating progress in maternal health outcomes or massive underreporting of maternal mortality by the facility.
- Extreme Regional Disparities:** Regional disparities have also changed over time, with Harari region consistently exhibiting the highest iMMR peaking near 227.8 per 100,000 live births in 2020 and remaining a visible outlier at approximately 200.5 per 100,000 live births in 2025 while Central Ethiopia region maintained the lowest rates, at 16.5 in 2020 and 15.8 in 2025.
- iMMR summary:** These results draw attention to persistent issues with maternal health, highlighting the significance of bolstering health systems, expanding access to high-quality care, enhancing facility tracking and maternal mortality reporting, and filling in data quality gaps to accurately capture true maternal mortality.

Still birth rate

- Institutional still birth rate (iSBR) showed reduction overtime, 12.8 in 2020 to 8.7 per 100,000 live births in the health facility in 2025.
- The disparity among regions reduced over time, in 2020 the highest iSBR recorded in Harari, 48.3 per 1000 live births in the facility and the lowest recorded in Central Ethiopia 7.3 followed by Sidama region 8.0 per 1000 live births in the facility.
- In 2025, it ranges from 3.5 in Sidama to 32.5 per 1000 live births in the facility in Harari. Three regions; Sidama (3.5), Central Ethiopia (4.0) and South Ethiopia (5.6) that has below the threshold level (6 per 1000 live births).

iMMR and iSBR: Data quality metrics

Ratio stillbirth to maternal deaths in the health facility data at national level

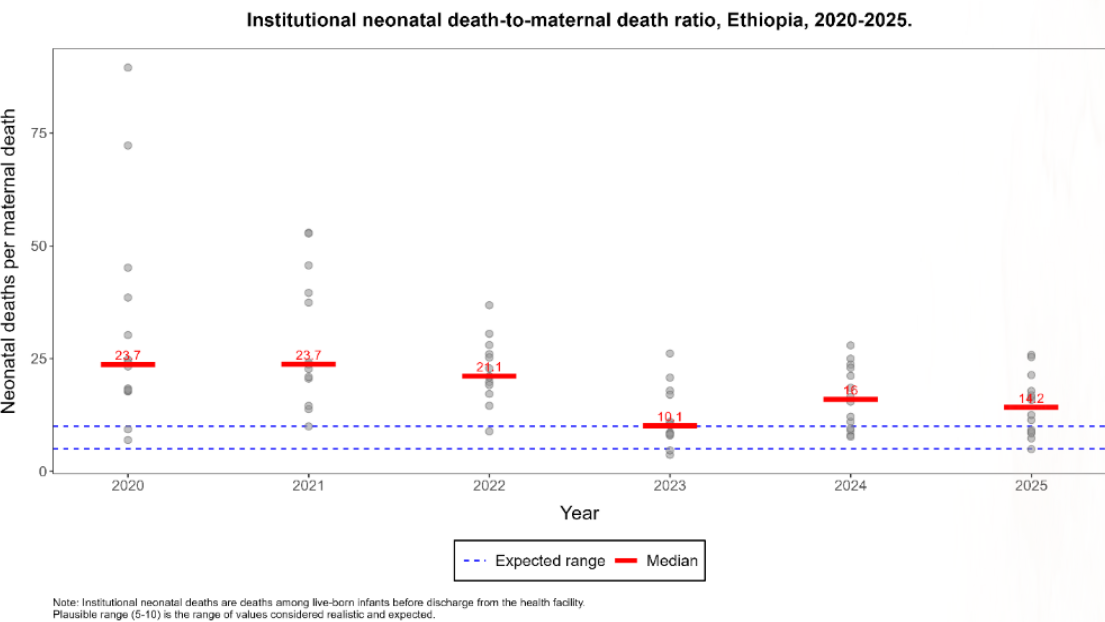


Interpretations

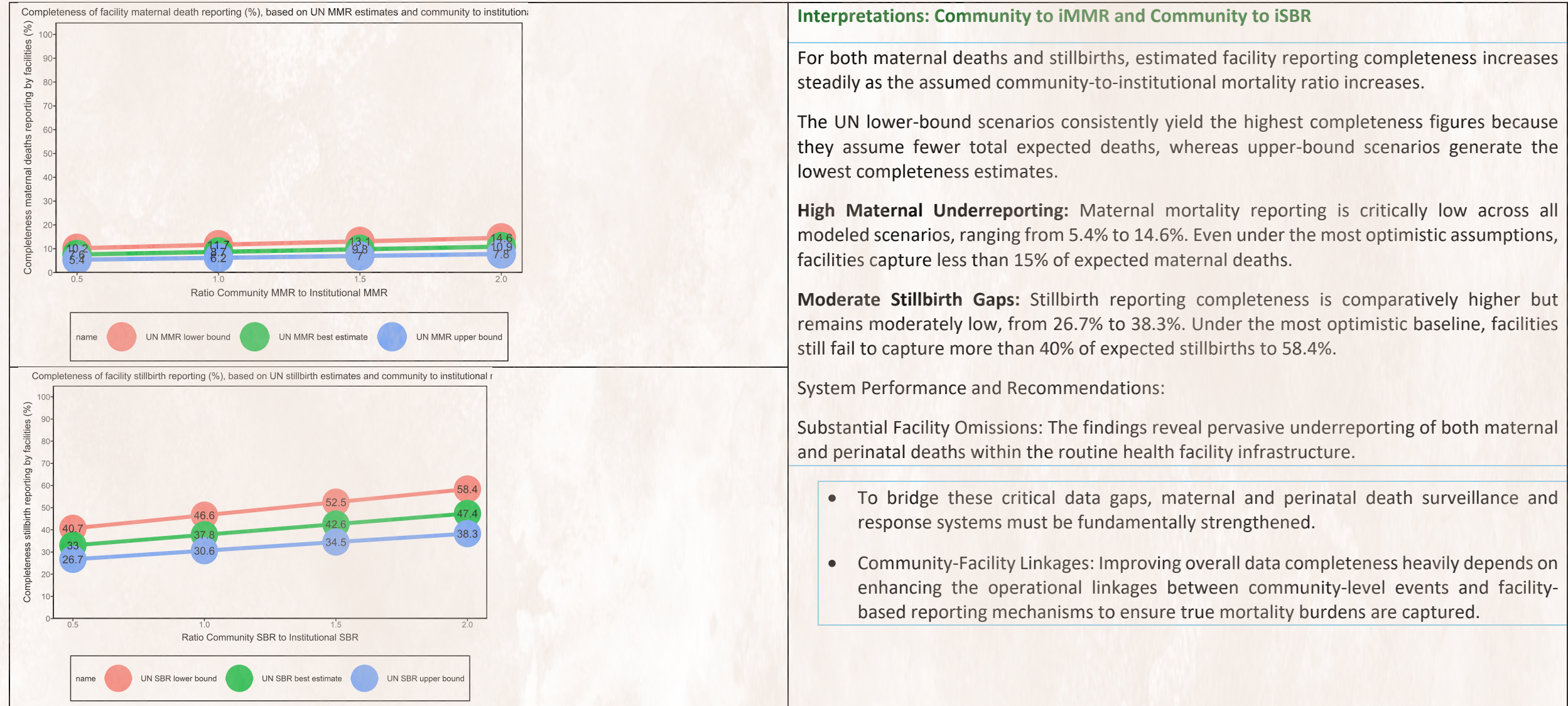
- Institutional Still birth to Maternal mortality ratio**
 - The figure shows the ratio of institutional still birth rate to maternal mortality rate. At national level institutional still birth rate to maternal mortality rate increased from 33.6 in 2020 to 35.6 in 2025. In 2020, the lowest ratio found in Afar region 6.8 and the highest found in Addis Ababa, 68.6. While in 2025, it ranged from 16 in Dire Dawa to 46.6 in Oromia region. Over the course of the period, the ratio exceeds the threshold level (5–15), indicating underreporting of maternal deaths. This suggests that more effort is needed to strengthen the maternal death.

Neonatal Mortality to Maternal Mortality Rate

- The figure below shows the ratio of institutional neonatal death to maternal mortality rate.
- At national level institutional neonatal death rate to maternal mortality rate decreased from 23.7 in 2020 to 14.2 in 2025.
- In 2020, the lowest ratio found in Afar region 6.9 and the highest found in Addis Ababa, 89.5. While in 2025, it ranged from 4.9 in Afar to 25.8 in Addis Ababa region.
- These indicates that the number of regions entering the designated plausible range (5–10) has been steadily increasing over time.
- The regional Disparities were tightened significantly from 2020 ranging from a ratio of 6.9 in the Afar region to a massive 89.5 in Addis Ababa, however in 2025 extreme variance is narrowing to a range of 4.9 in Afar and 25.8 in Addis Ababa.

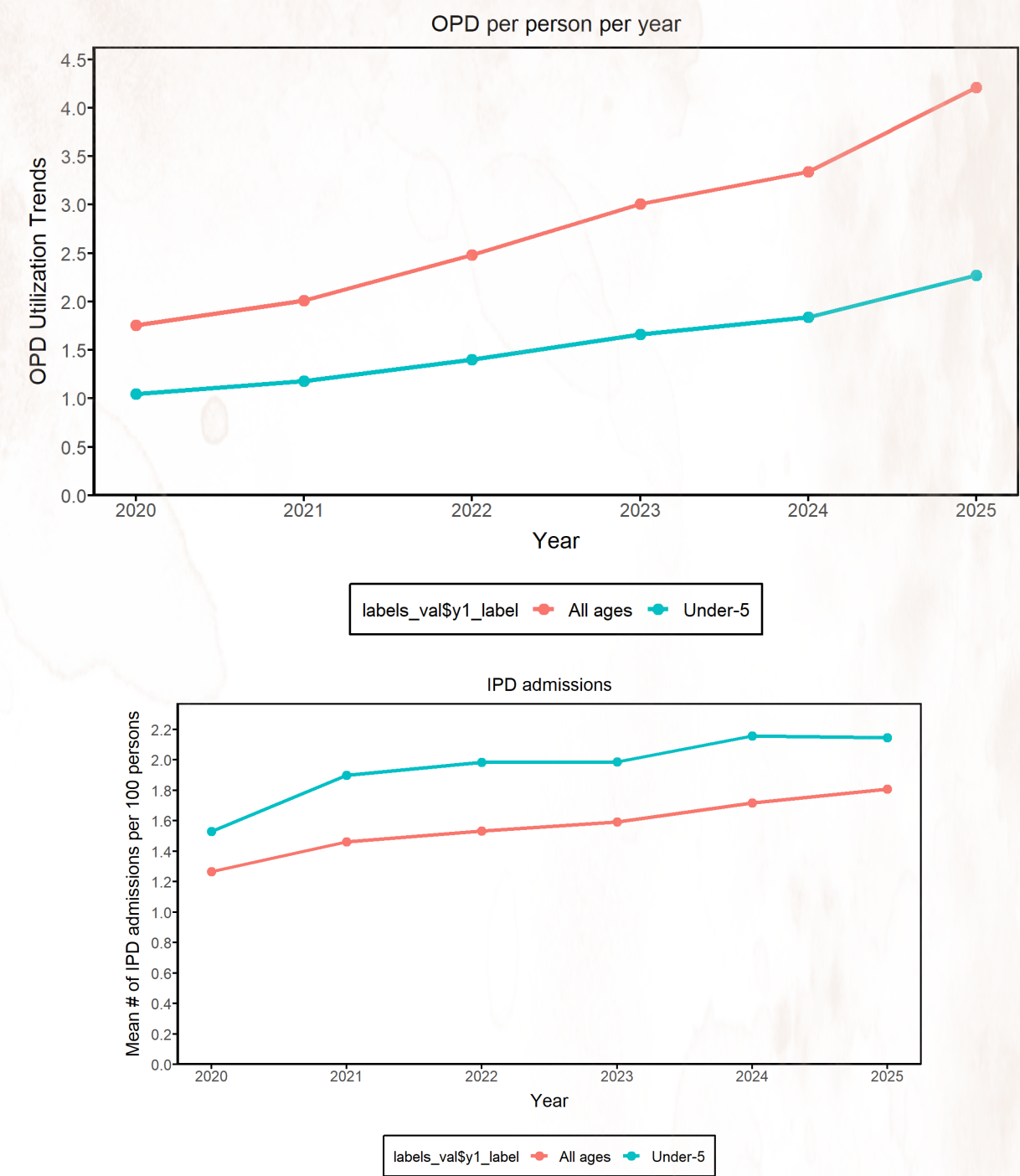


Estimated completeness of facility maternal death and stillbirth reporting



5. Curative health service utilization for sick children

Outpatient and inpatient service utilization



Interpretations

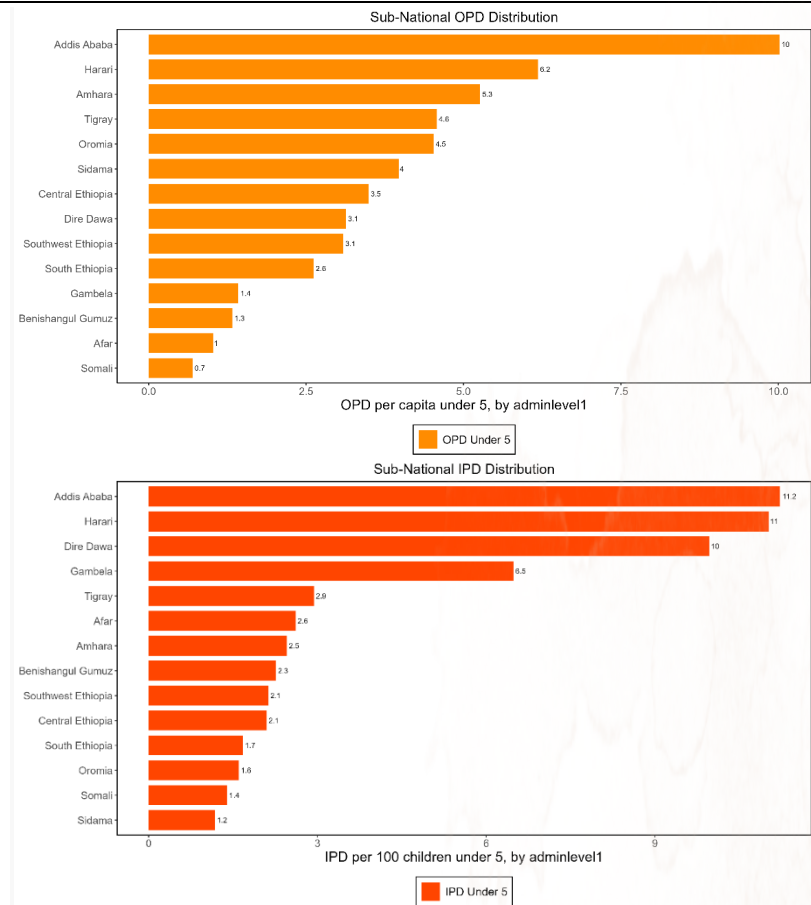
Service utilization DQA

- Completeness of reporting:** Reporting completeness improved from 80–84% (2019–2023) to 90% (2024) and 92% (2025); regions with ≥90% completeness increased to 79% in 2025. Data element completeness remained excellent, reaching 100% in both 2024 and 2025. Reporting quality improved substantially, though some regions still require support to achieve ≥90% completeness.
- Extreme outliers:** Extreme outliers were minimal, with 100% of OPD monthly values free of extreme outliers throughout 2019–2025. Regions without outliers ranged from 86% to 100%, declining to 86% in 2025. National data quality remains strong, but a few regions require targeted data quality review.
- Ratio OPD/IPD under 5:** The under-5 OPD/IPD ratio increased from 91 (2019) to 194 (2025), remaining well above the expected range (16–47). The persistently high ratio suggests possible underreporting of inpatient admissions or data quality issues and warrants further investigation.
- Percent OPD/IPD under 5:** The proportions of under-5 OPD (23–27%) and IPD (18–19%) remained stable and within the expected ranges throughout the period. Age-specific reporting is plausible and consistent, although the high OPD/IPD ratio warrants further investigation.

Coverage Performance and Trends

- OPD utilization increased steadily from 1.6 to 4.2 visits/person/year and from 1.0 to 2.3 visits/under-5 child/year between 2019 and 2025. The smooth trend and values within expected ranges indicate plausible reporting and improving outpatient service utilization.
- IPD admissions increased gradually from 1.4 to 1.8 per 100 population and 1.7 to 2.2 per 100 under-5 children between 2019 and 2025, with a temporary decline in 2020. Trends are stable, plausible, and suggest improving access to inpatient services with no major data quality concerns.

Regional/provincial service utilization



Interpretations

Data Consistency and Plausibility: Substantial Regional Variation: Outpatient and inpatient service utilization vary widely across regions, reflecting stark differences in geographic access, underlying disease burden, or local reporting practices.

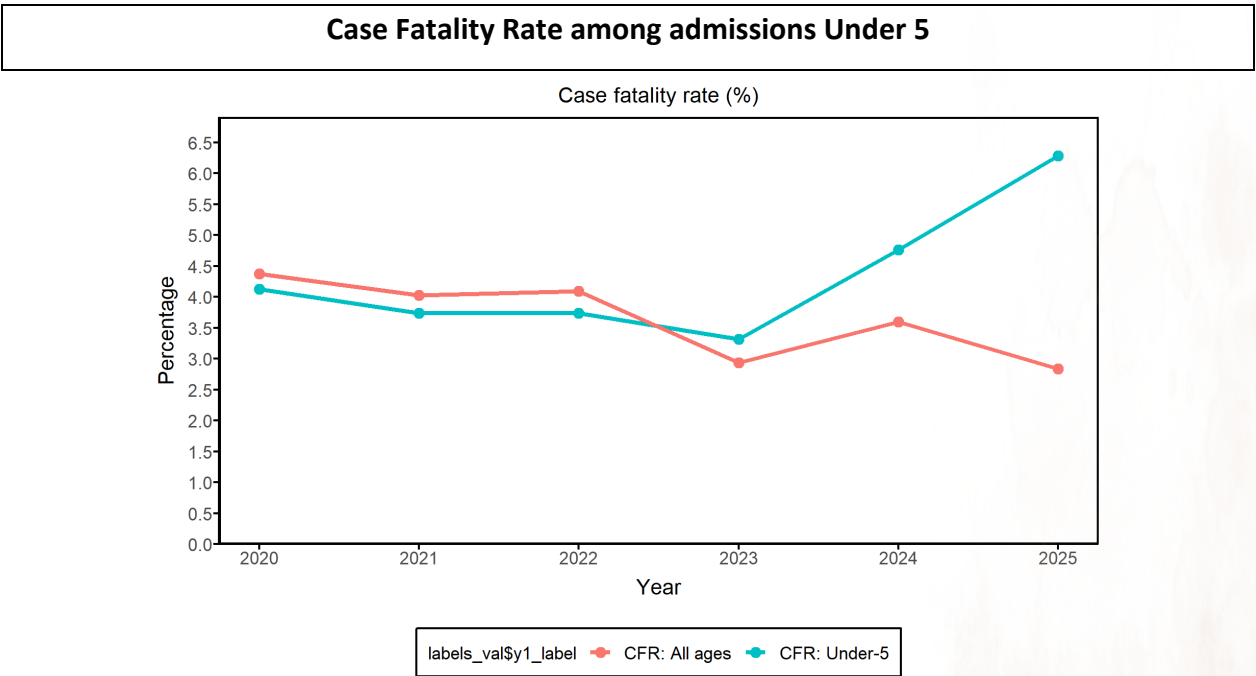
Implausibly High OPD Flags: Multiple regions violate the standard expected threshold of 0.3 to 4 OPD visits per child per year. Addis Ababa (10.0), Harari (6.2), Amhara (5.3), Tigray (4.6), and Oromia (4.5) exhibit extremely high rates that must be flagged for data quality and reporting assessments.

Plausible IPD Boundaries: In contrast to outpatient data, regional inpatient admissions completely fall within the expected threshold of 1 to 15 admissions per 100 children per year, indicating strong overall data plausibility for IPD tracking.

Coverage Performance and Trends Critical Care Access Gaps: Low utilization clusters tightly in specific areas. Somali (0.7), Afar, Benishangul Gumuz, and Gambela exhibit very low under-five OPD per capita, pointing toward severe health service inaccessibility or low service uptake.

Low Admission Anomalies: On the inpatient side, Addis Ababa leads with the highest utilization (11.2 admissions per 100 children), while Sidama (1.2), Somali (1.4), Oromia (1.6), and South Ethiopia (1.7) sit at the lowest extreme.

Key Interpretations: While regional IPD figures are mathematically plausible, the exceptionally low admission rates in Sidama, Somali, Oromia, and South Ethiopia require further field-level investigation to determine if the cause is poor tracking or true low access.



Interpretations

- Case Fatality Rate (CFR) for the overall population fluctuates between 2.8% and 4.4%. In contrast, the under-five CFR remained relatively stable at 3.3–4.1% during 2019–2023, but increased substantially to approximately 4.8% in 2024 and 6.2% in 2025. This sharp upward trend is inconsistent with the previous years and the reason for the fluctuation need to be
- Interpretation:** The all-ages case fatality rate remains relatively stable and shows a slight downward trend, suggesting no major concerns regarding national inpatient mortality patterns. However, the high increase in under-five CFR during 2024–2025 is unusual and should be investigated through detailed review of facility records, disease-specific mortality patterns, referral practices, and reporting completeness.

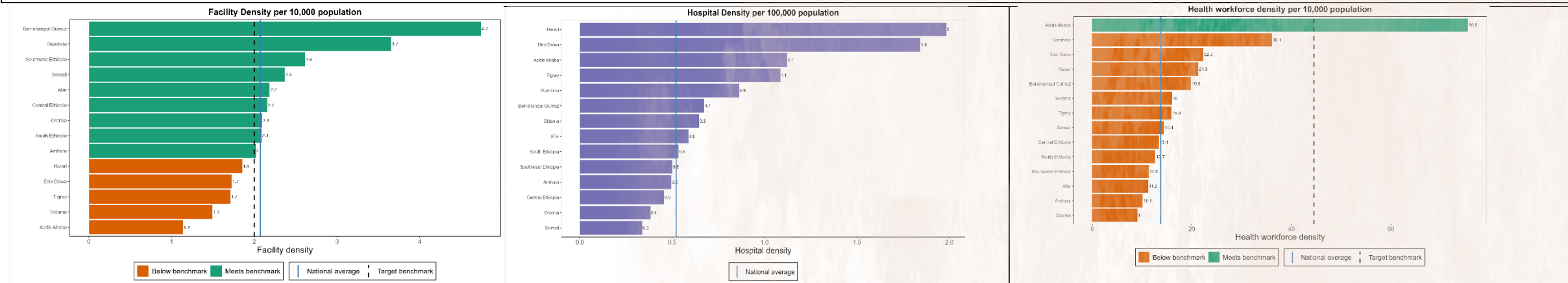
6. Health system progress and performance

Health system inputs

Interpretations

- At the national level, Ethiopia's health facility density (HFD) is at 2.1 per 10,000 populations. The health workforce density (core health professionals) remains significantly below the global standard, at 13.7 per 10,000 population compared to the recommended 23.
- The hospital bed density stands at only 4.1 per 10,000, far below the expected 25 per 10,000 population. These gaps highlight the urgent need for strategic deployment and strengthened political commitment to increase health workforce and hospital bed capacity, ensuring equitable access to quality health services and progress toward meeting international standards. It needs further effort to achieve the required work force density, 44.5 per 10,000 population to achieve the universal health coverage.

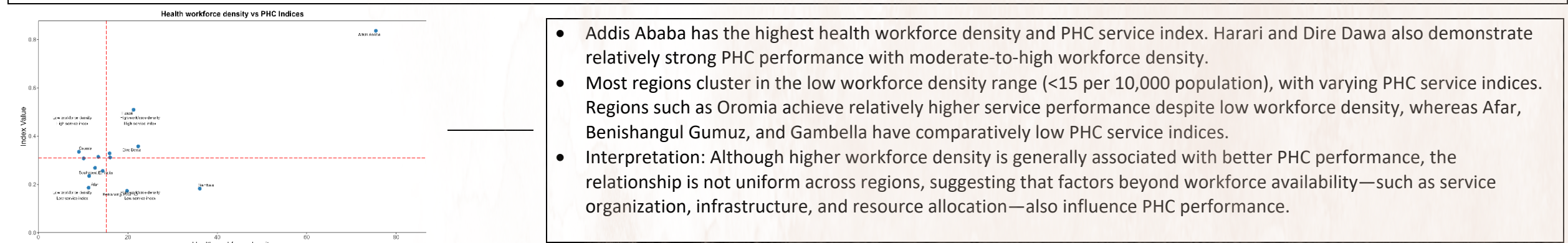
Health system inputs by region/province



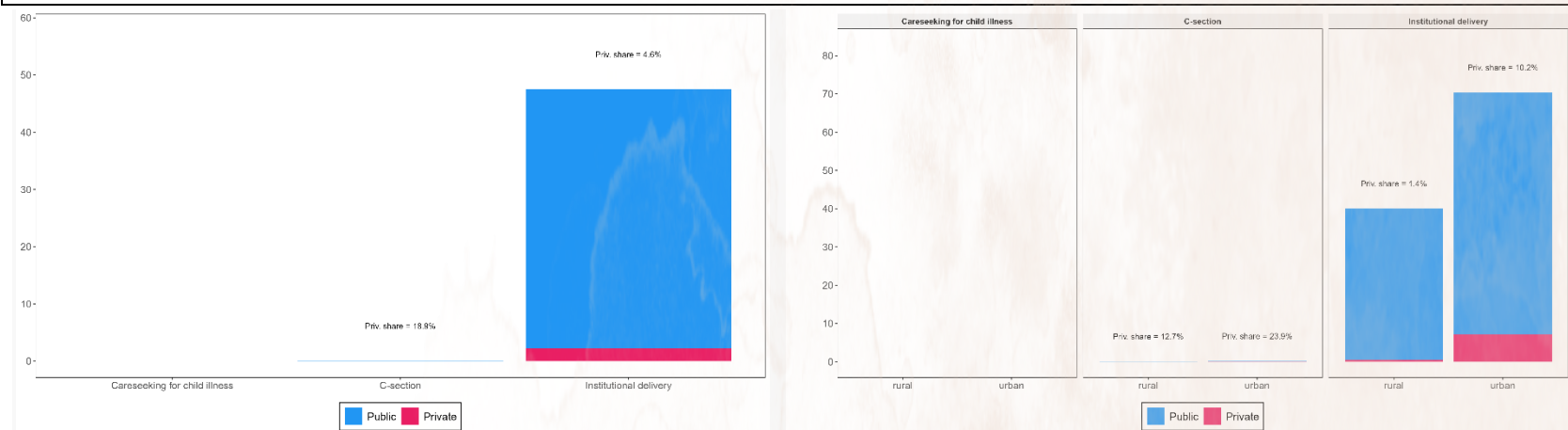
Interpretations

- Ethiopia’s health system inputs, specifically health facility density, hospital density, and health workforce density, generally fall below World Health Organization (WHO) standards, with notable regional disparities in 2025.
- Health Facility Density (HFD) by region: While the national average HFD is 2.1 per 10,000 populations, in line with the WHO benchmark of 2 per 10,000. Benishngul gumuz is 4 times higher than Addis Ababa. Critically, 36% of all regions remain below the recommended HFD level.
- Five regions have a HFD below the WHO standard
- Hospital Density:** The national hospital density is approximately 0.5 hospitals per 100,000 population, with 9 of 14 regions exceeding the national average. Hospital density is significantly below the national target of 2 per 100,000. Harari has five times more hospital density than Somali. Only Addis Ababa, Harari, and Dire Dawa exceed 1 hospital per 100,000 populations.
- Core Health Workforce (CHWF) Density:** The national health workforce density is 13.7 per 10,000 population, far below the benchmark of 44.5 per 10,000. Only Addis Ababa (76.5) exceeds the benchmark. Addis Ababa had 38 times more CHWF than Southwest Ethiopia. Only Addis Ababa, Harari, Dire Dawa, and Gambella have met the WHO target of 23 health workers per 10,000 populations.
- The data clearly indicates a severe disparity in the distribution of health professionals, who predominantly prefer to serve in urban areas, likely due to the higher concentration of private health facilities. This urban-rural disparity in health system inputs directly impacts equitable access to healthcare.

Health system outputs by inputs at the subnational level



Private sector and RMNCAH services



- The private sector accounts for 19% of cesarean sections and 95% of deliveries remaining in public health facilities, indicating that private sector contribution is currently minimal, possibly due to low reporting, preference for public services owing to accessibility and costs, and the need for further qualitative research.
- In urban areas, private facilities perform nearly 24% of cesarean sections, compared to 12.7% in rural areas, reflecting better access to C/S and SBAs in urban private facilities. However, SBA coverage remains low 1.4% in rural areas and 10.2% in urban settings.

Recommendations

- Standardize Penta1- and ANC1-derived denominators for estimating population coverage indicators, specifically for maternal and immunization programs.
- Institutionalize feedback loop systems with enhanced and regular data quality audits and district-level data validation reviews.
- Targeted underperforming and conflict-affected regions with tailored support for reporting completeness, access to essential MNCH services, and service quality.
- Strengthen maternal and perinatal death surveillance systems and improve facility-based reporting of stillbirth and maternal deaths.
- Expand investments in health workforce and infrastructure, prioritizing hospital bed and staff density in underserved geographies.
- Promote equitable access through outreach, community engagement, and differentiated support to geographies and populations lagging the national average.
- Enhance private sector engagement and reporting, especially in urban areas, to leverage their role in provisions of outpatient and inpatient services, and essential and life-saving interventions (such as C-section and skilled birth services).