

Ghana

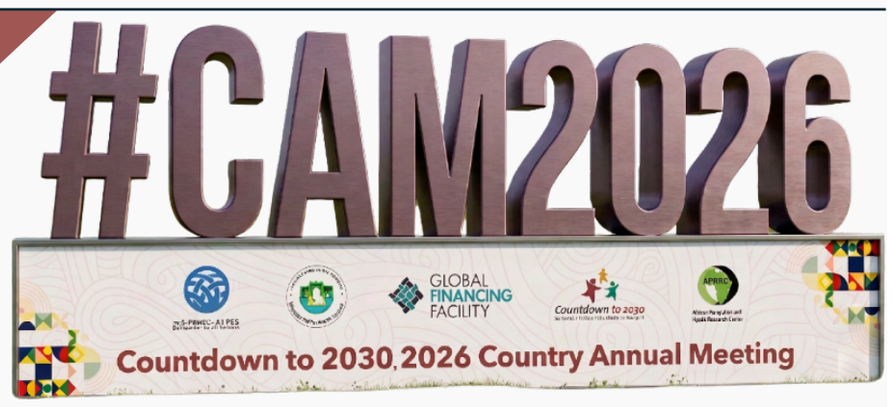
SYNTHESIS REPORT

2026

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



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



Team Members

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KEY FINDINGS

1. Health facility data quality assessment: numerators and denominators

NUMERATORS: Routinely reported health facility data are an important data source for health indicators. The data are reported by health facilities on events such as immunizations given, or live births attended. As with any data, quality is an issue. Data are assessed for completeness of reporting by health facilities, extreme outliers and internal consistency. Appropriate adjustments are made before using statistics.

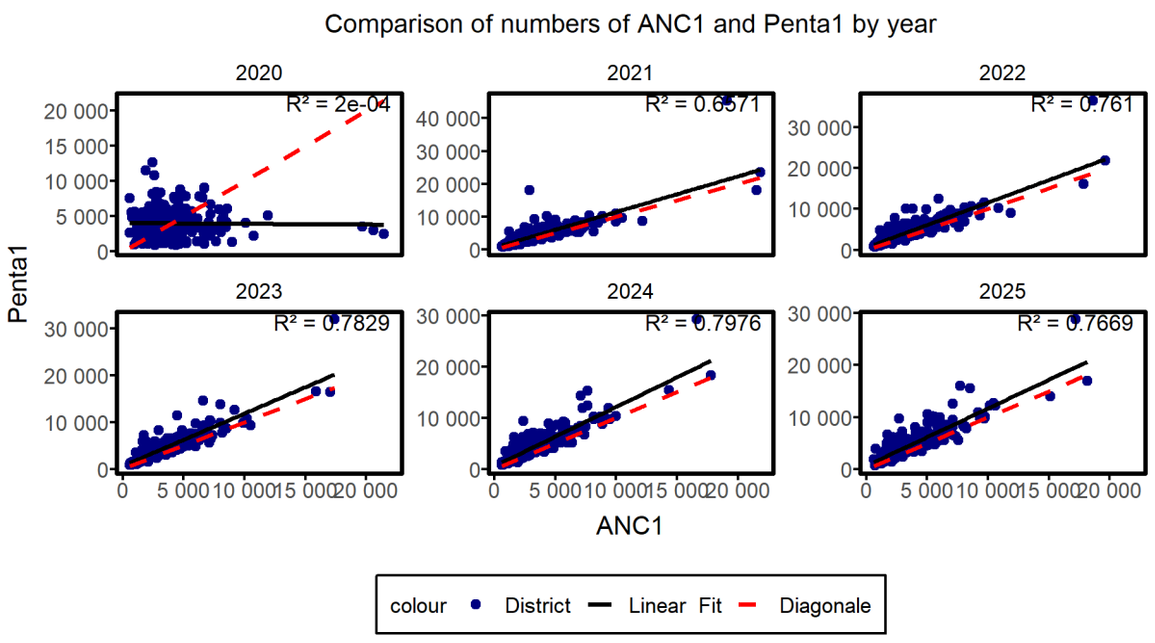
Summary of reported health facility data quality, DHIS2, 2020-2025

	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)	92	99	99	99	99	98
1b	% of derestricts with completeness of facility reporting >= 90	74	98	97	96	96	95
1c	% of districts with no missing values for the 4 forms	98	100	100	100	100	100
2. Extreme outliers (mean of ANC, delivery, immunization)							
2a	% of monthly values that are not extreme outliers (national)	100	100	100	100	100	100
2b	% of districts with no extreme outliers in the year	83	89	89	88	89	87
3. Consistency of annual reporting							
3a	Ratio anc1/penta1	1.22	0.82	0.80	0.77	0.76	0.80
3b	Ratio penta1/penta3	0.98	0.97	0.98	0.97	0.96	0.97
3c	% district with anc1/penta1 in expected ranged	16	20	15	11	9	18
3d	% district with penta1/penta3 in expected ranged	41	36	39	34	30	38
4	**Annual data quality score**	**72**	**77**	**77**	**75**	**75**	**77**

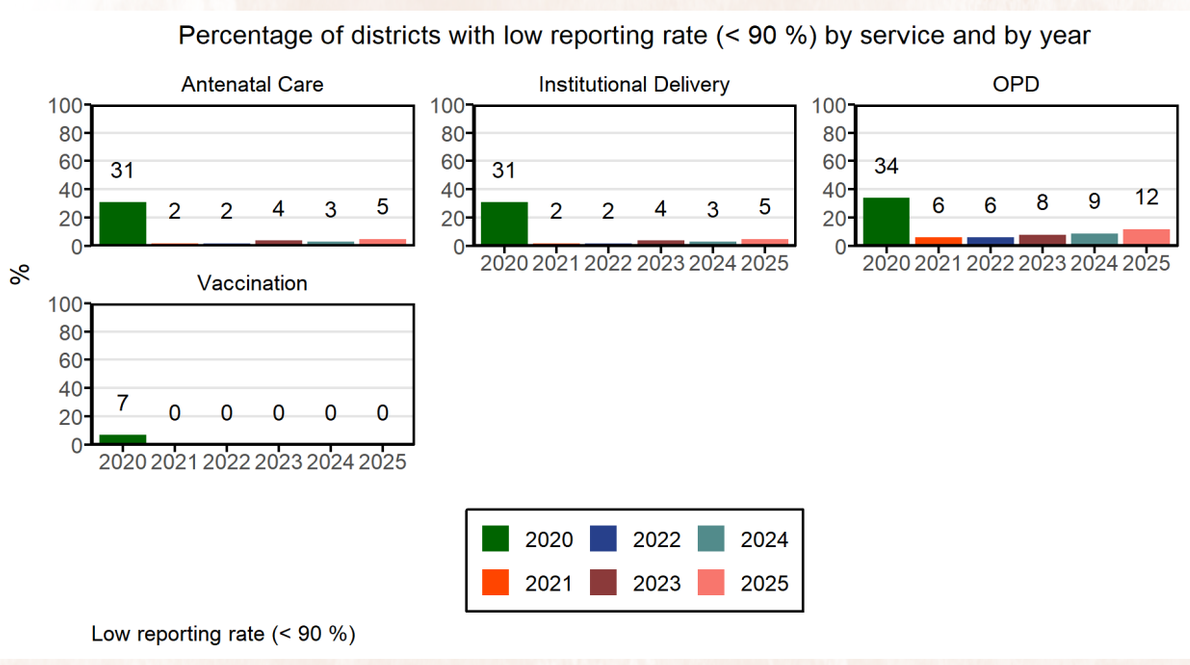
Interpretations and Key Insights

- The individual data quality checks were pooled together into a single annual scorecard for 2020–2025.
- Reporting is strong and has improved over the period with rare outliers.
- Consistency remains the weakest domain, likely reflecting denominator and master facility list errors, incomplete private-sector reporting, and inconsistent data entry across districts. Raising consistency scores will require routine data-quality audits and supportive supervision, automated DHIS2 validation checks, improved denominator and master facility list management, structured feedback to districts and facilities, and targeted training for data managers in underperforming districts.
- The overall annual data quality score, therefore, sits in the mid-70s across the period (72 in 2020, then 75–77), supported by strong reporting and few outliers but held back by these district-level consistency results.

ANC1 and Penta1 counts showed almost no correlation in 2020 ($R^2 \approx 0.0002$), then aligned steadily, reaching $R^2 = 0.80$ by 2024 signaling an improvement in cross-indicator data reliability. This reflects COVID-19 disruption to services following Ghana's first recorded case in March 2020. The 2020 outliers were concentrated in urban districts (Accra, Tamale, Kumasi), where high population mobility and under-reporting by private facilities not captured in DHIMS2 are more common.

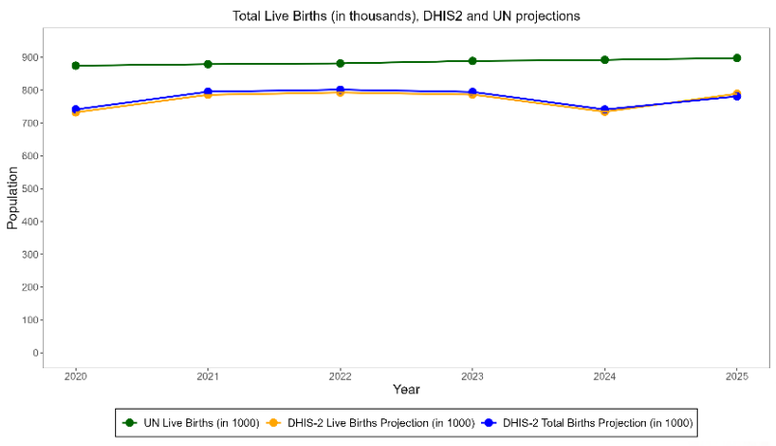


Reporting rates for OPD attendance, ANC, institutional delivery and vaccination services recovered strongly following the COVID-19 disruptions of 2020. Plausible contributing factors include DHIMS2 itself, the National Health Insurance Scheme's requirement that data be entered before reimbursement, routine performance evaluations at national, regional and district levels, and the use of these data to track progress towards universal health coverage. However, this analysis does not confirm these as the principal drivers, and other unexamined factors may also have contributed; the finding should be read with caution.

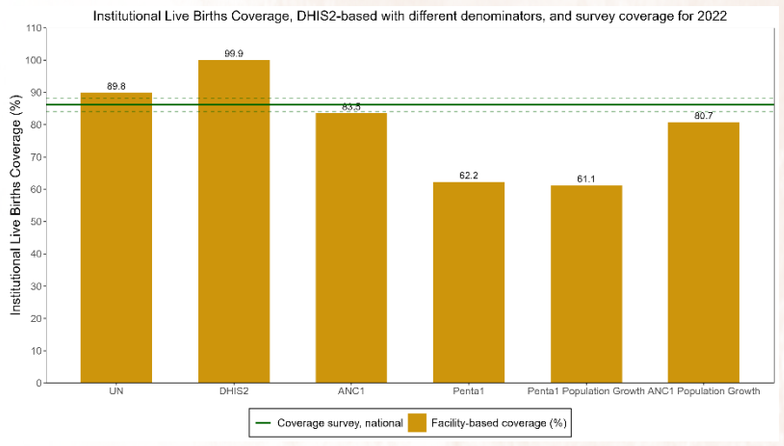


Service coverage is the population who received a service (numerator) divided by the population who needed it (the denominator). Four denominator options are tested using institutional live births and Penta3 immunization coverage as test indicators (Figures 2c and 2d). The quality of DHIS2 population projections is assessed through consistency over time and comparison with UN projections. Two further denominators are derived from near-universal services, ANC1 and Penta1, and the most plausible option is used to generate the remaining statistics.

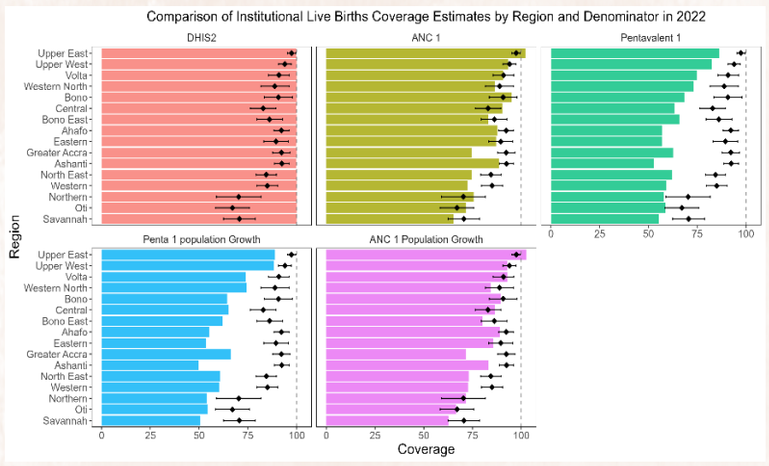
Total Livebirths



National Institutional Live Births



Subnational Institutional Live births



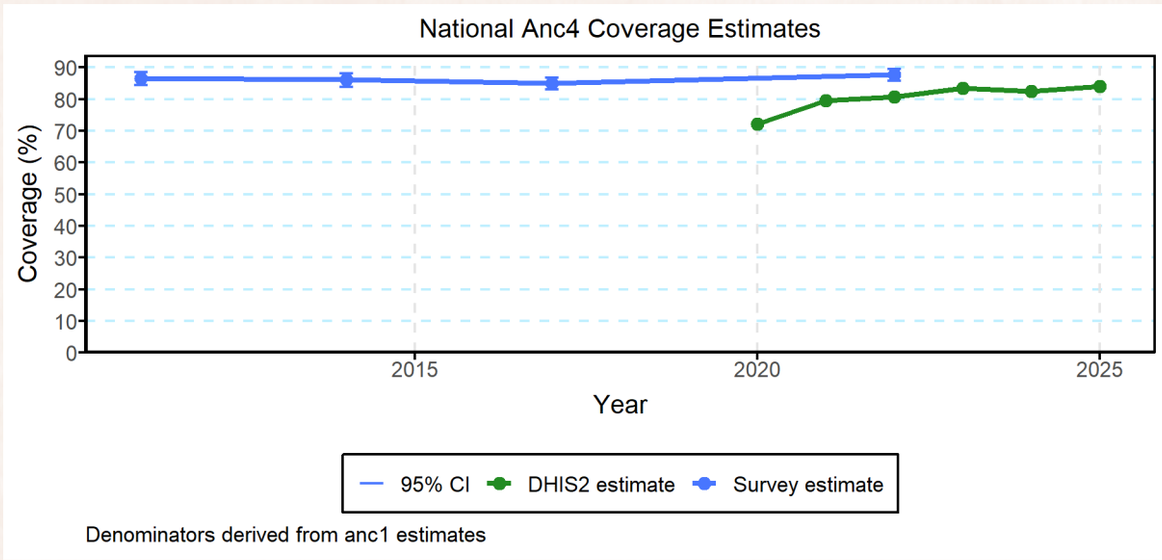
Interpretations

- DHIS2's national population and birth projections frequently exceed UN projections for the same target population. Because DHIS2's sub-national growth rates tend to run higher than the UN's adjusted demographic estimates, using the raw DHIS2 birth projections as a denominator understates coverage for key maternal health indicators.
- DHIS2's projected live births have closely matched DHIS2's recorded live births from 2020 to 2025, indicating consistent and complete data entry. This is supported by DHIS2's reported 99.9% institutional live-birth coverage. Monthly data validation is now routine at national, regional and district levels, and the Holistic Assessment an inter-regional peer-review mechanism tracks this indicator and holds regions accountable for their own data-quality reviews.
- Nationally, the coverage survey (solid green line) serves as the benchmark, at 86% coverage. The best-performing denominator is the one producing facility-based coverage estimates closest to this line, without unrealistically over- or under-estimating coverage. ANC1-derived estimates perform best for maternal health indicators, and Penta1-derived estimates perform best for child health indicators; both typically also perform best at the subnational level.**ANC-1 and Penta-1 were therefore used for maternal indicators and immunization indicators.**

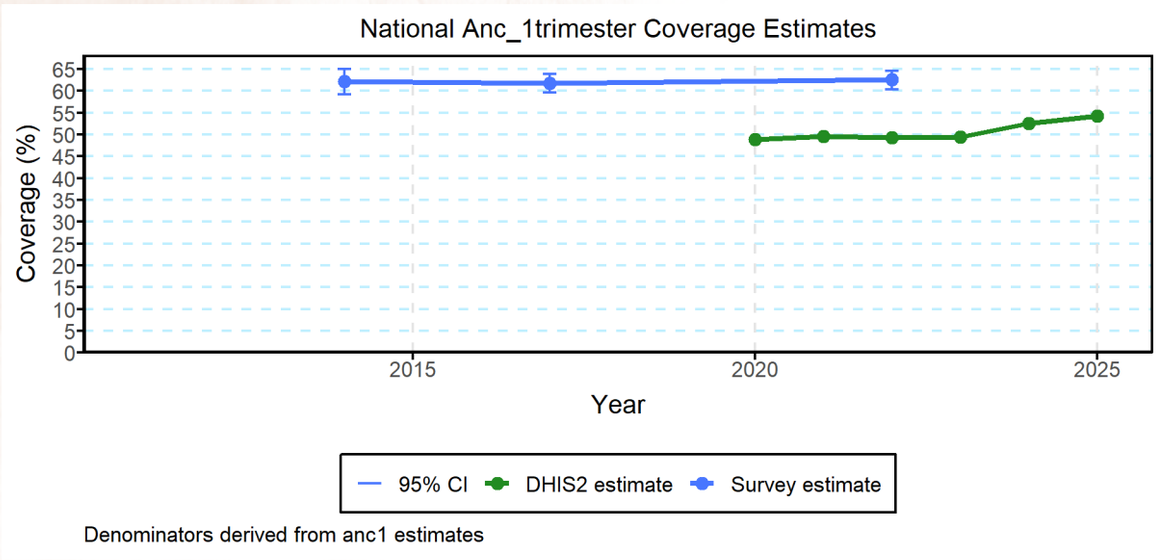
2. National coverage trends: facility data and surveys

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

ANC 4



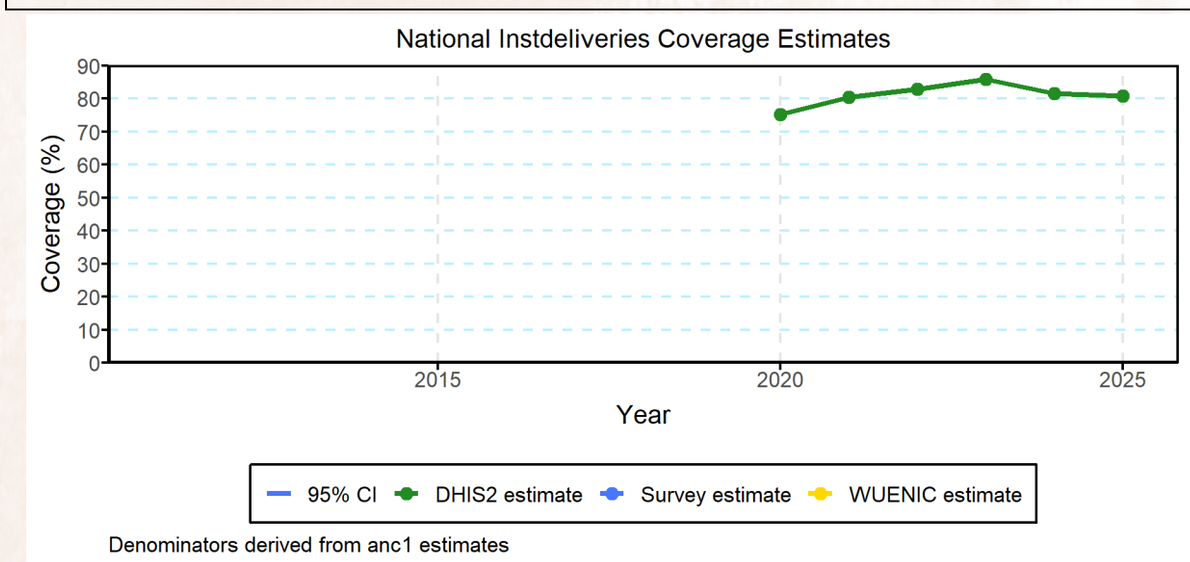
ANC early visit



Interpretations

- ANC4 coverage (72–87%) is consistently higher than first-trimester ANC attendance (49–62%). These indicators measure different things . First-trimester attendance reflects the timing of care initiation, while ANC4 reflects continuity and completion of four or more visits so the difference should not be read as women 'catching up' after a missed early visit, and should be interpreted with caution rather than as an expected pattern. Survey estimates were stable through 2022 (85% for ANC4, 62% for first-trimester visits), consistent with the absence of major disruption or scale-up. The rise in DHIS2 facility estimates from 2020 to 2025 (72% to 84% for ANC4; 49% to 54% for early visits) most plausibly reflects improving data completeness and reporting practices rather than a genuine surge in attendance.
- Agreement between the two data sources varies by indicator, with facility records initially underestimating and gradually converging with survey estimates. In the overlapping period (2020–2022), the survey estimate is approximately 87% while DHIS2 begins at 72% in 2020; DHIS2 then rises to 80% by 2022 and 84% by 2025, bringing facility data close to the survey baseline.
- Because both charts use ANC1-derived denominators, the lower DHIS2 percentages suggest facilities under-record subsequent visits (ANC4) or the timing of the first booking, relative to what women report in household surveys.

Institutional delivery

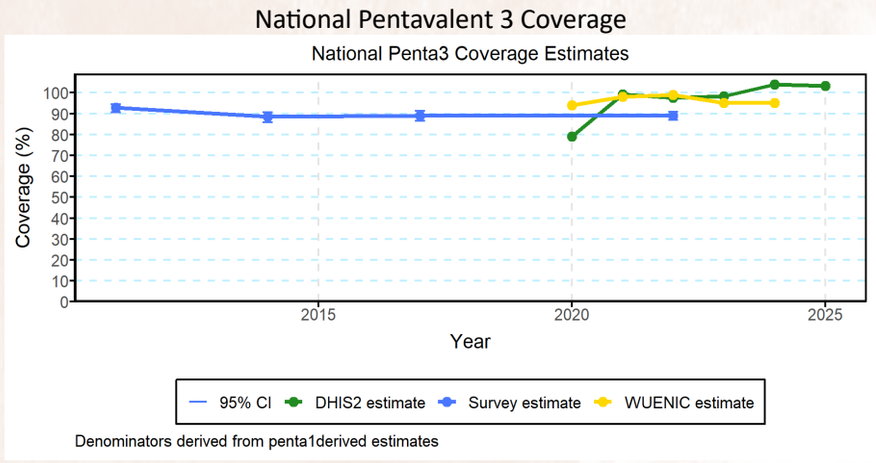


Interpretations

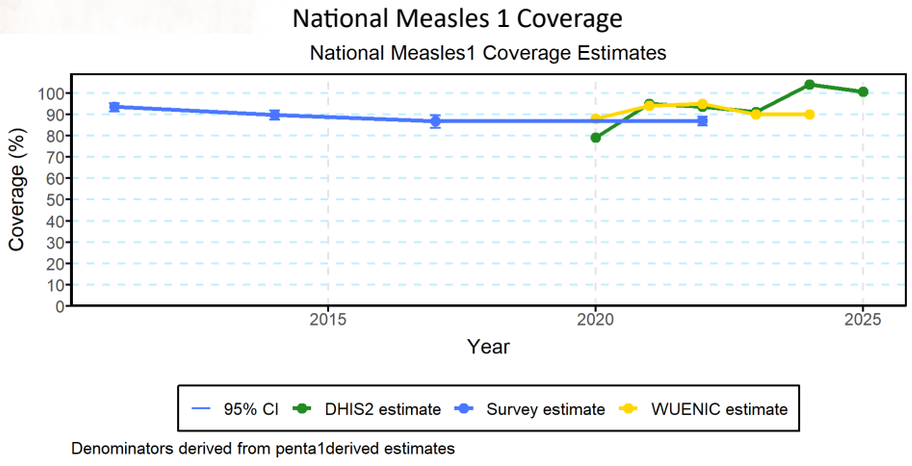
- The national institutional delivery coverage levels shown in the chart fluctuate between 75% and 86% from 2020 to 2025 and align closely with earlier national household surveys (approximately 78–79% in MICS 2017, MHS 2017 and DHS 2022).
- The gradual rise from 75% in 2020 to a peak of roughly 86% in 2023 reflects steady, credible progress in healthcare access, facility delivery utilization, and data completeness.
- There is an exceptionally strong, seamless alignment where the **DHIS2 estimate** line (green) interfaces with the historical **Survey estimate** baseline
- The coverage performs well but still falls short of standard UHC targets, which typically aim for 90% or more for essential maternal health services.
- The trajectory demonstrates that a vast majority of pregnant women in Ghana are delivering in health facilities under the care of skilled birth attendants. However, the minor stagnation/decline observed between 2023 and 2025 indicates that accelerated strategic efforts are needed to bridge the remaining gap and reach the final 90%+ national milestone.

Immunization: Penta 3, Measles 1

National Pentavalent 3 Coverage



National Measles 1 Coverage

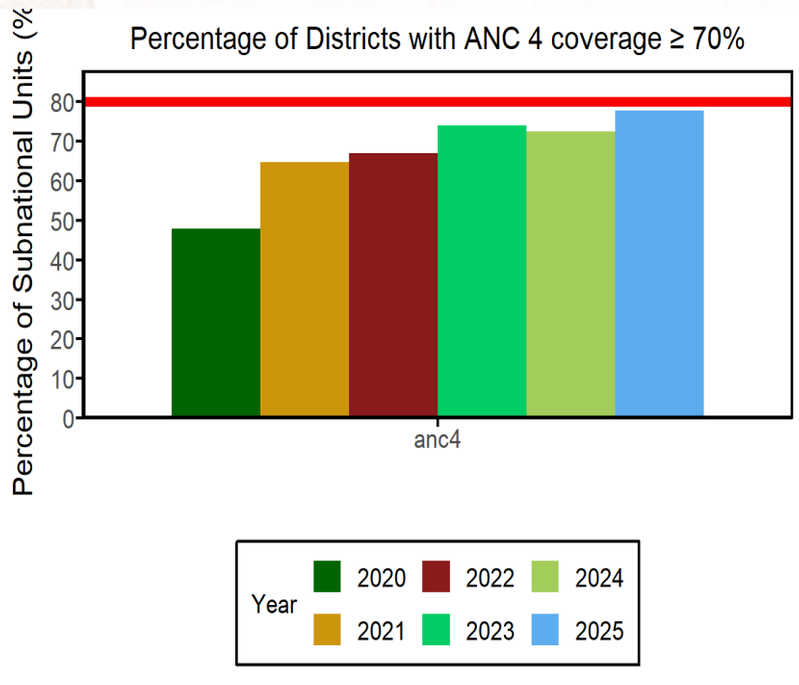


Interpretations

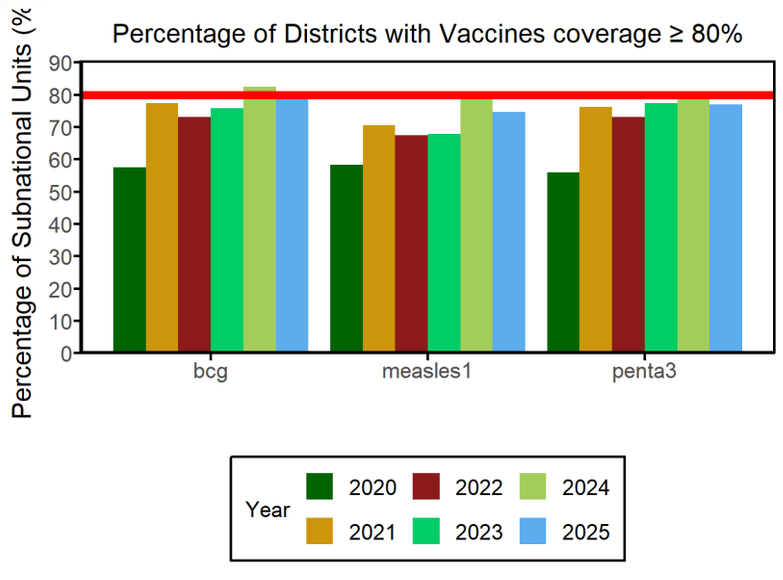
- Household survey estimates (blue line) show a stable baseline of 86–93% from 2012 to 2022 for both Penta3 and measles, consistent with Ghana's historically strong routine immunization performance.
- The marginal decline in DHIS2 estimates in 2021/2022 reflects service disruptions from COVID-19 restrictions introduced in March 2020.
- Penta1 coverage above 100% in 2024 is not epidemiologically plausible. This most likely reflects a denominator problem an underestimated target population though numerator errors such as dose overcounting may also contribute.
- DHIS2 facility estimates and WUENIC estimates align closely from 2021 to 2023, tracking within 94–98%. In 2020, however, WUENIC was notably higher than DHIS2 (approximately 94% vs 79%).
- The rapid recovery from the 2020 drop reflects a resilient routine immunization system. The subsequent climb past 100% in 2024–2025, however, most likely reflects an underestimated denominator rather than a genuine rise in coverage, indicating that population projections should be reviewed alongside routine data-quality checks.

Percent of districts achieving high coverage targets

ANC 4



Child Health Indicators



Interpretations

- The proportion of women completing four or more ANC visits has risen steadily, reaching about 78% in 2025 , 2 percentage points below the 80% national target.
- BCG, measles 1 and Penta3 coverage all fluctuated over the period, with 2020 recording the weakest performance due to COVID-19-related disruptions to public health services.
- Despite strong national performance, 20–30% of districts continue to lag behind due to geographic, infrastructural and socioeconomic disparities. This is illustrated by Penta3 coverage: fewer than 80% of districts meet the 80% target even though every region records coverage above 100%. This apparent contradiction most likely reflects underestimated target populations in some districts, which inflate district-level coverage and, in turn, pull regional totals above 100%, while many other districts genuinely fall short. Reliance on aggregated data can mask pockets of unimmunized children or unreached pregnant women within a district, making it harder for local teams to design targeted intervention.

3. Equity

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

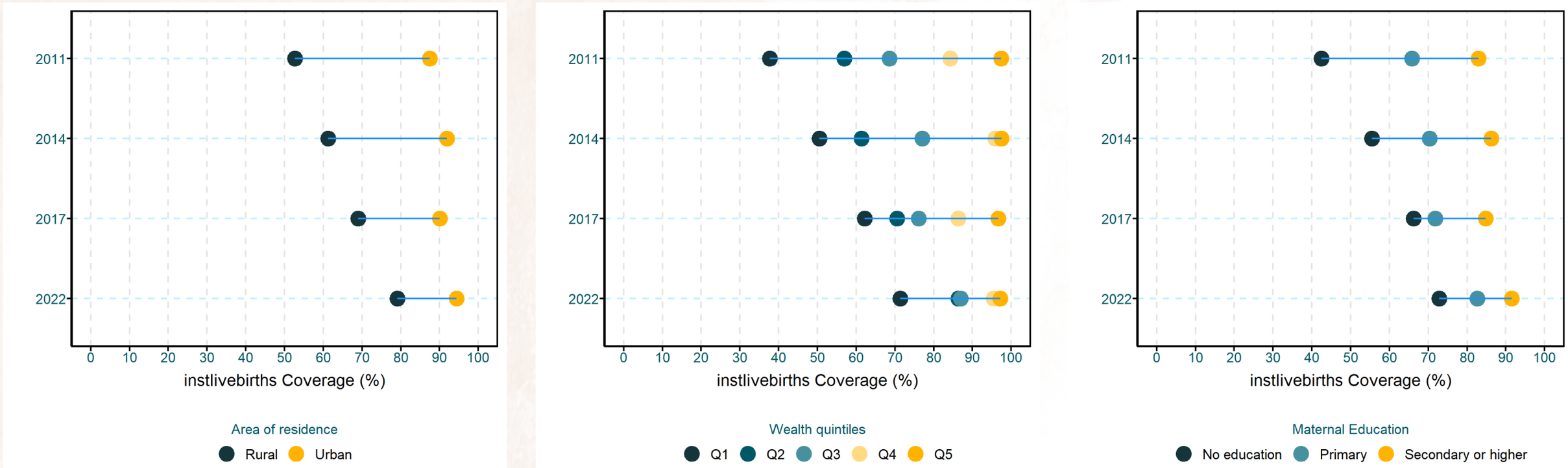
Institutional Live Births

Clear, persistent differences exist across all three stratifiers.

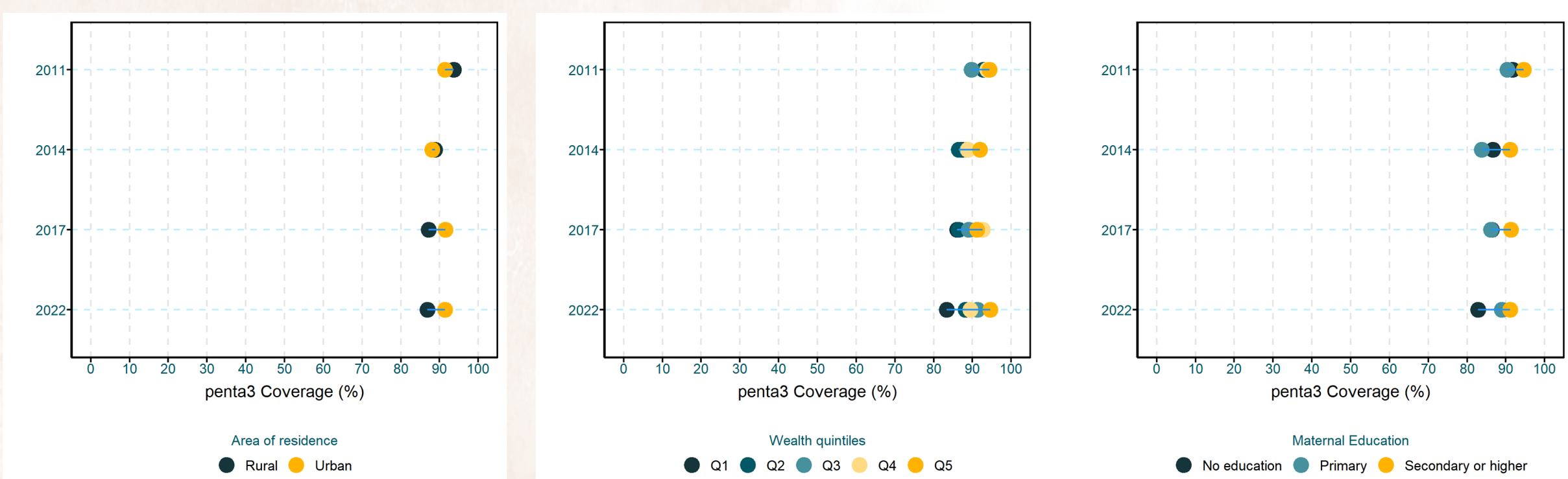
- Rural women are consistently left behind compared to urban women.
- The Poorer a woman, the less likely she is to deliver in a health facility
- The higher the educational status of the woman, the more likely she is to deliver in a health facility

These inequities have narrowed over time across residence, wealth quintile and education level. Ghana's Free Maternal Health Care Policy (2008) and National Health Insurance Scheme (2003) have reduced out-of-pocket costs and improved financial access, while successive governments have improved geographic access by increasing the number of functional district hospitals from under 20 in 2000 to over 130 today.

For a nation with 261 districts, increasing facilities to improve accessibility will greatly minimize these inequities.



Pentavalent 3rd Dose

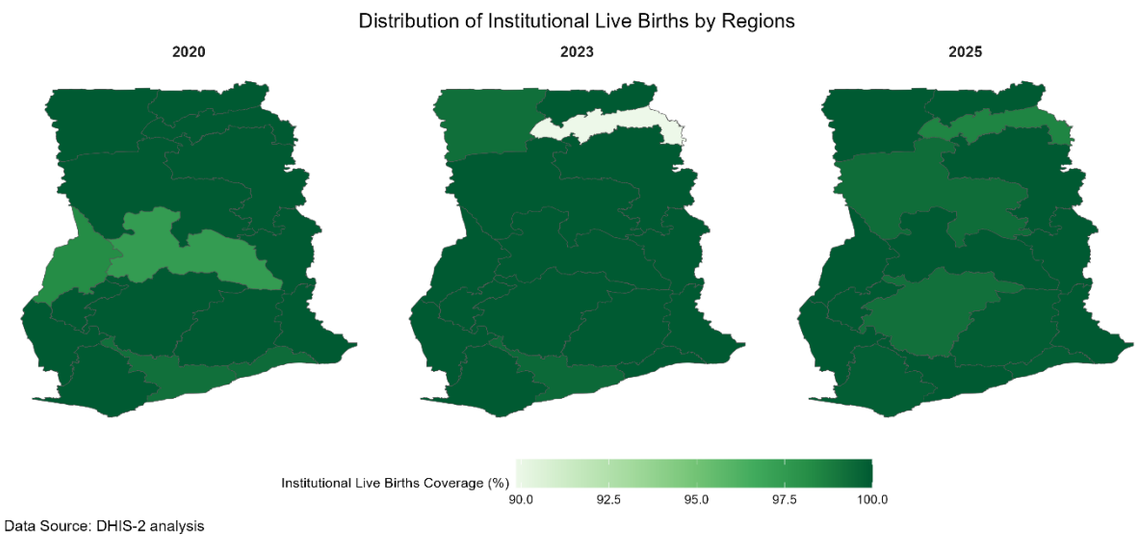


Interpretations

- Penta3 coverage shows no significant inequities by residence, wealth quintile or education level. These gains can be consolidated through continued support for infrastructure that provides equitable access regardless of residence or wealth status, and through targeted identification of zero-dose children to help sustain progress.

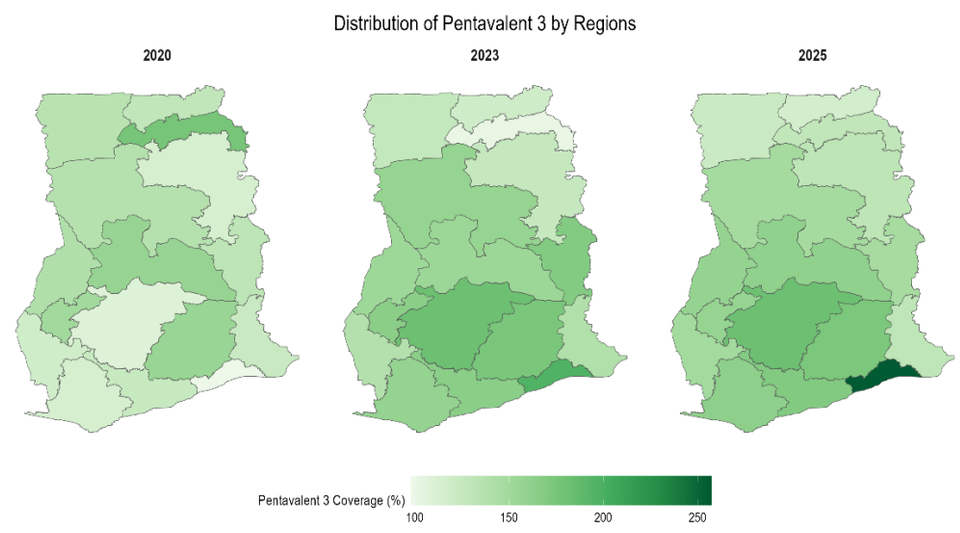
Geographical inequalities: Health facility data

Sub-National Institutional Livebirth Coverage



Data Source: DHIS-2 analysis

Sub-National Pentavalent 3 Coverage



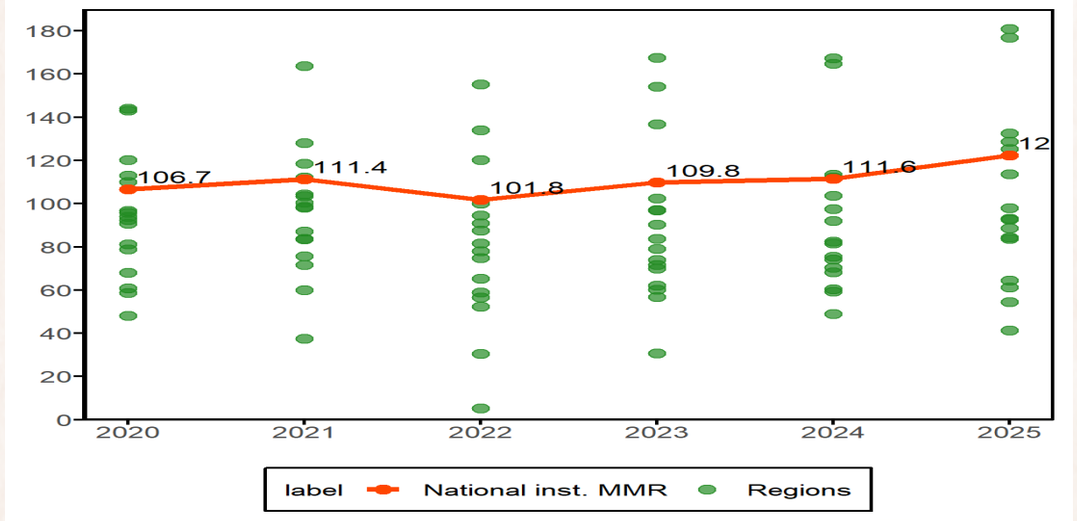
Data Source: DHIS-2 analysis

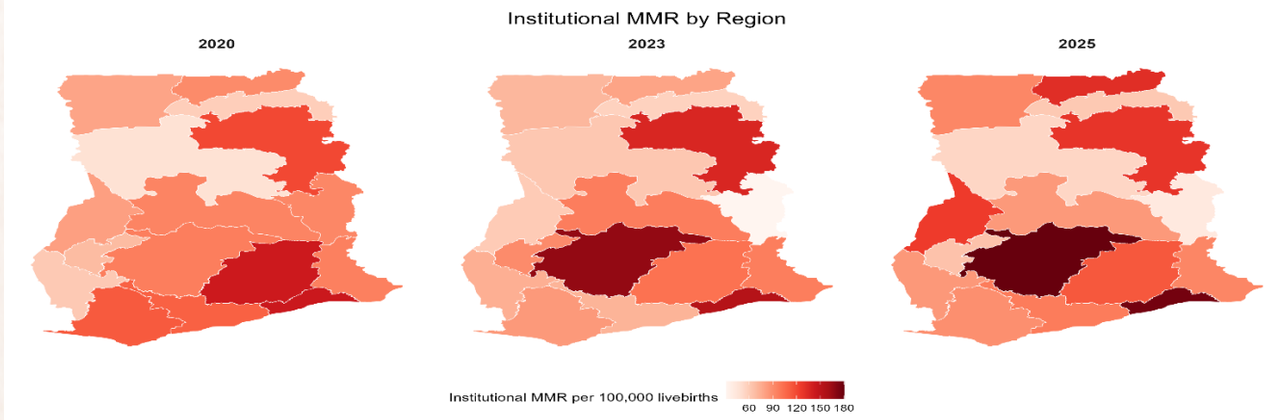
- This section maps institutional delivery coverage and Penta 3 coverage across Ghana's regions and plots the spread of regional values year by year.
- The maps show that institutional delivery coverage varies by region, with most regions falling roughly within the 60–90% range and coverage generally improving (shading becoming greener) between 2020 and 2025.

4. Institutional mortality

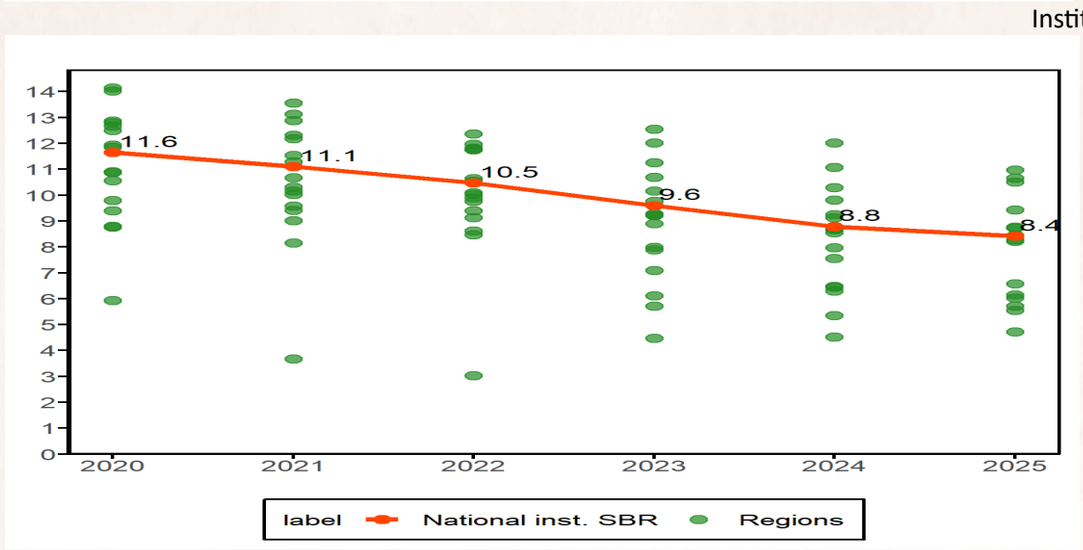
Institutional Mortality trends (iMMR, iSBR)

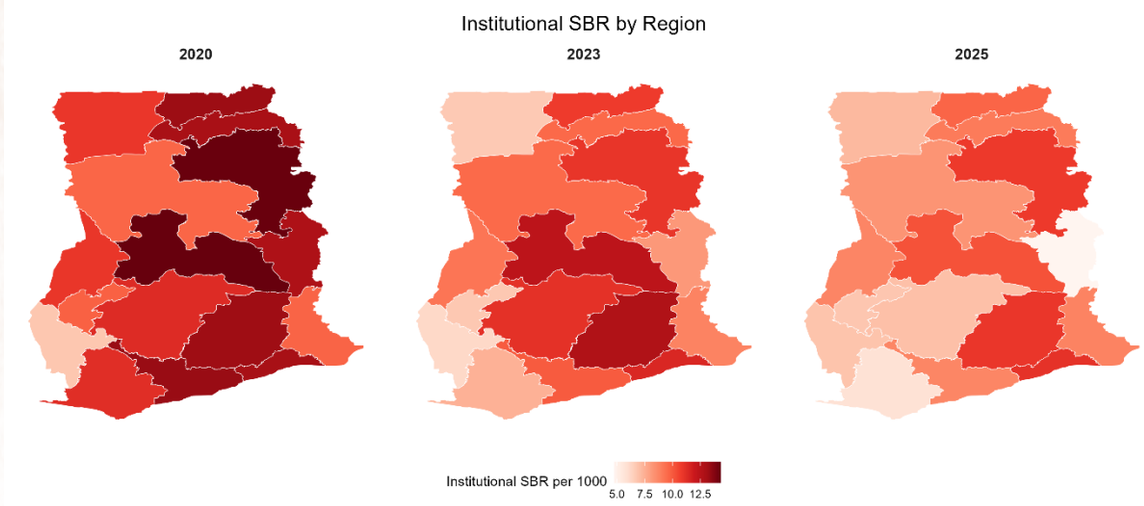
Institutional Maternal Moratlity Ratio





Institutional Stillbirth Rates



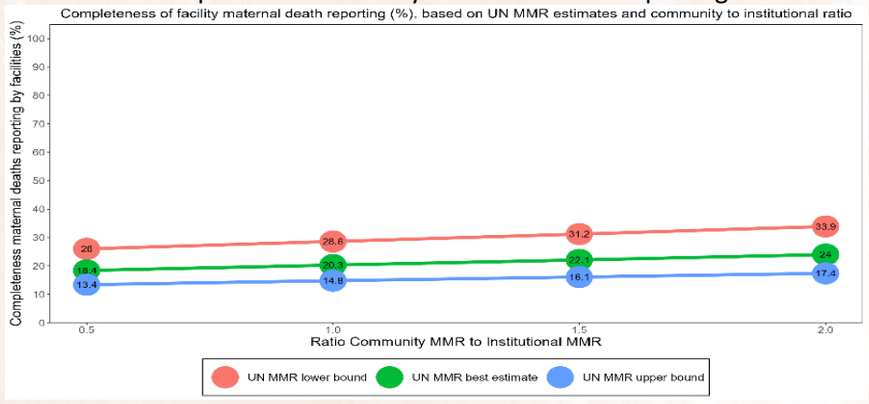


Interpretations

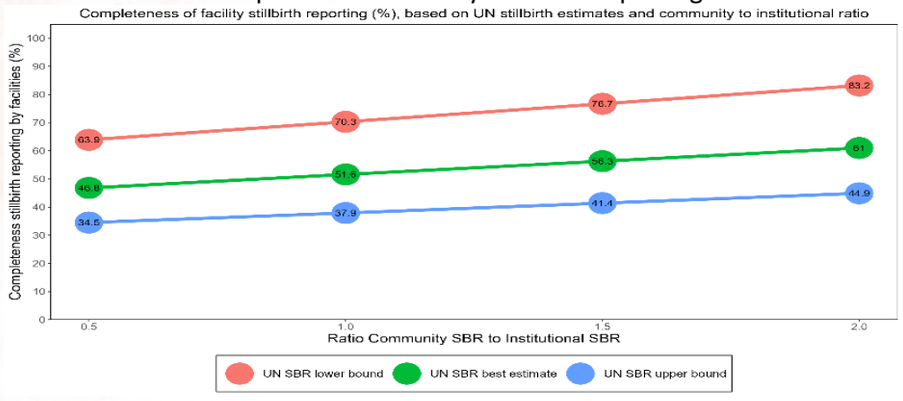
- The institutional maternal mortality ratio (iMMR) increased overall, despite a temporary improvement in 2022, and varied widely across regions.
- Ghana's institutional stillbirth rate (iSBR) declined steadily every year, from 11.6 per 1,000 births in 2020 to 8.4 per 1,000 births in 2025, with narrowing regional dispersion pointing to more uniform improvement. This trend is consistent with global patterns and suggests that improvements in facility-based intrapartum care are translating into fewer fetal deaths. The improvement likely reflects gains in antenatal care — including malaria and HIV prevention — and greater use of skilled birth attendants over the past decade.

Data quality metrics

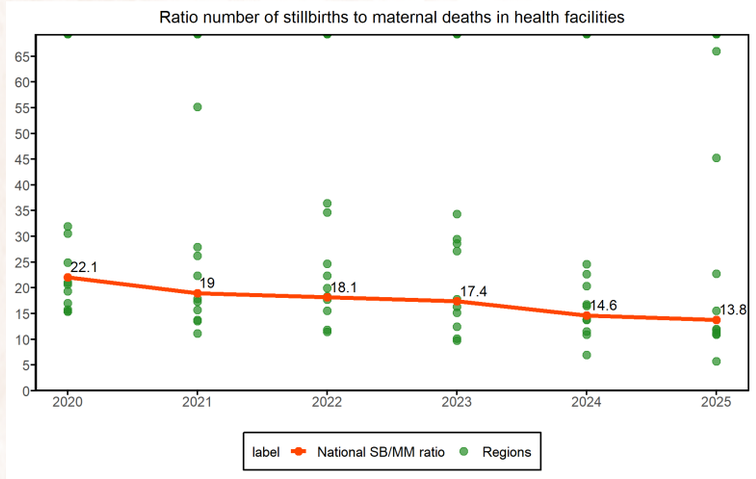
Completeness of Facility Maternal Death Reporting



Completeness of Facility Stillbirth Reporting



Ratio of the number of institutional stillbirths to institutional maternal deaths



Interpretation

Completeness of facility maternal death reporting (based on UN MMR estimates). Using the UN's best MMR estimate, facilities capture approximately 18% of expected maternal deaths when community mortality is assumed to be half of institutional mortality, rising to about 24% under a ratio of 2.0. Even under the most favourable scenario the UN's lower-bound estimate combined with a ratio of 2.0 completeness reaches only about 34%. The range across UN estimate bounds (13–34%) exceeds the range across ratio assumptions, indicating that uncertainty in the underlying UN estimates contributes more to this variation than the choice of ratio. These low completeness figures are notable given Ghana's high institutional delivery coverage (approximately 86%). If mortality risk were similar in facility and community deliveries, most maternal deaths would be expected to occur, and be recorded, in facilities. Facility reporting instead captures under a quarter of expected deaths, so the shortfall is unlikely to be explained mainly by deaths occurring in the community.

Three explanations are more plausible; the data cannot distinguish between them:

- incomplete recording of deaths that do occur in facilities, including misclassification and non-reporting private facilities;
- maternal deaths occurring outside the delivery episode (during pregnancy, from abortion-related causes, or postpartum after discharge) which high institutional delivery coverage does not capture; and
- overestimation of expected deaths by the UN model-based estimates, whose wide uncertainty bounds dominate the variation in computed completeness.

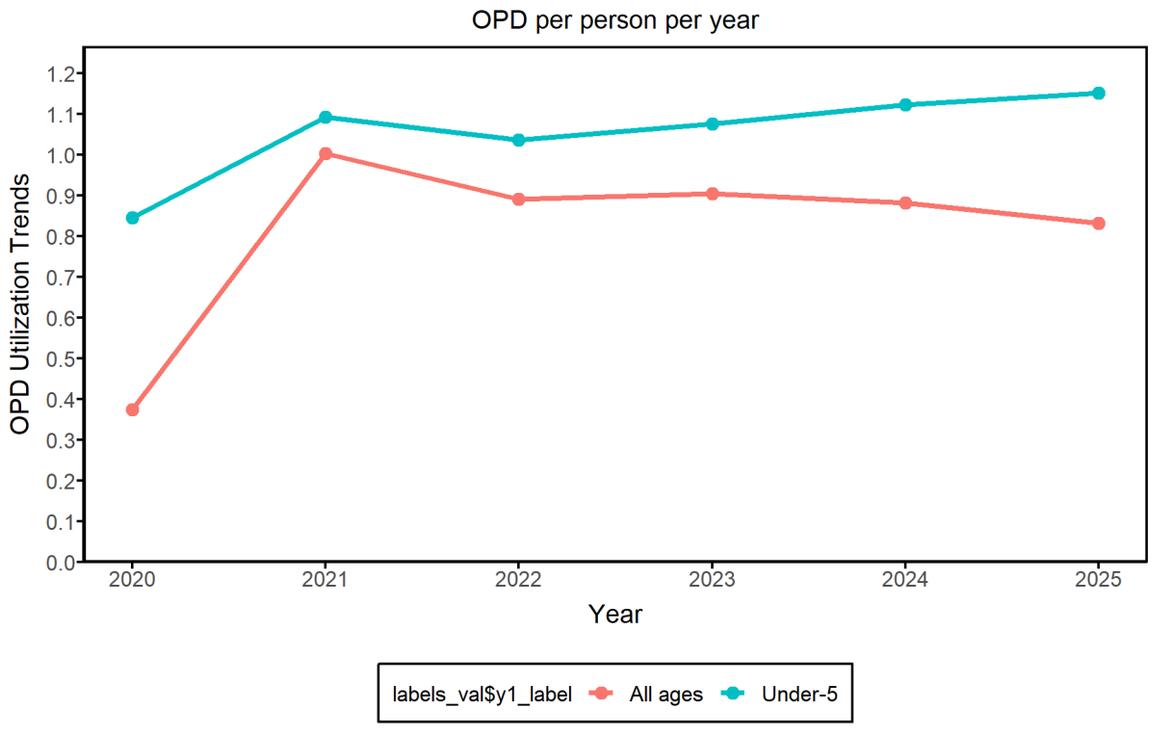
This third explanation is worth weighing: for countries without complete civil registration, UN estimates are derived from statistical modelling rather than counted deaths, so completeness figures are only as reliable as the estimates against which they are benchmarked.

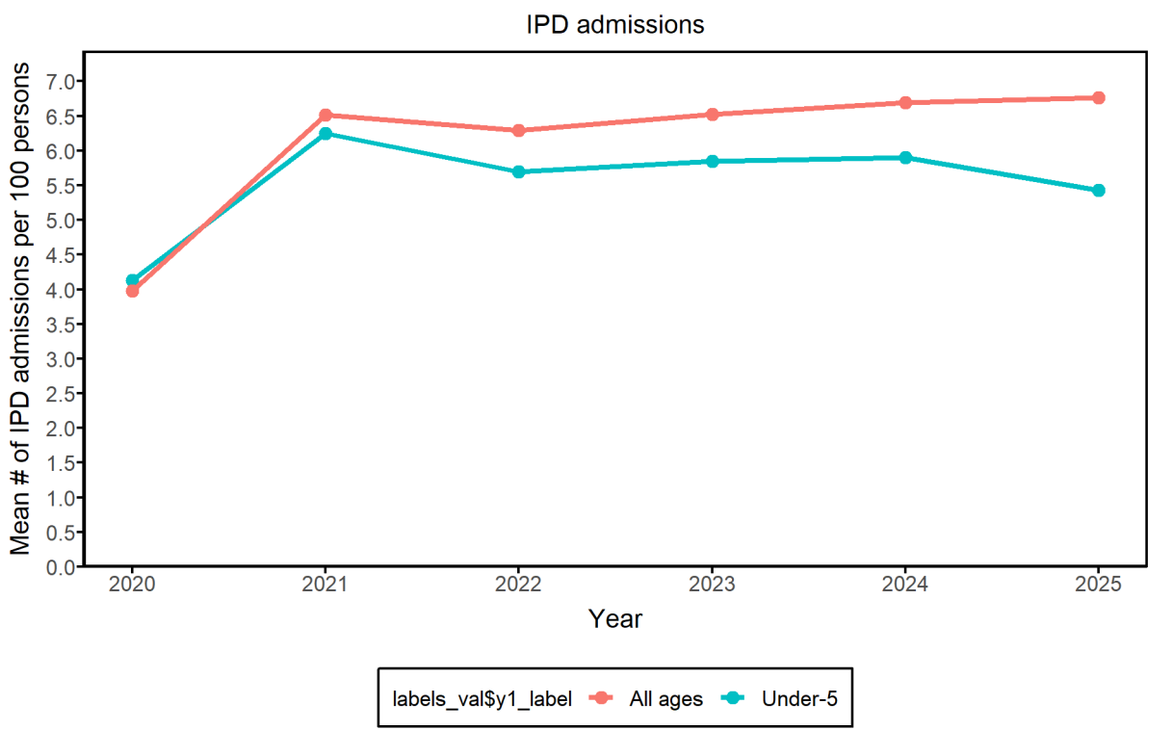
Stillbirth reporting completeness ranges from about 47% (ratio 0.5) to 61% (ratio 2.0), and from 35% to 83% across the full range of UN estimate bounds. As with maternal deaths, uncertainty in the UN estimates contributes more than the choice of ratio. Completeness is markedly higher for stillbirths, plausibly because they occur around the time of facility delivery and are therefore more likely to be recorded, whereas many maternal deaths occur outside facilities or after discharge and may go uncaptured.

The national ratio of recorded stillbirths to maternal deaths fell steadily from 22.1 in 2020 to 13.8 in 2025, with wide regional variation each year. Because stillbirths are captured at roughly two to three times the completeness of maternal deaths, the facility-recorded ratio overstates the true population ratio. This decline is consistent either with a genuine fall in stillbirths relative to maternal deaths or with improved maternal death notification which is plausible given strengthened MDSR activities and the data cannot distinguish between the two. Persistently extreme values in some regions across multiple years suggest durable differences in reporting and classification practices rather than one-off anomalies.

5. Curative health service utilization for sick children

Outpatient and inpatient service utilization



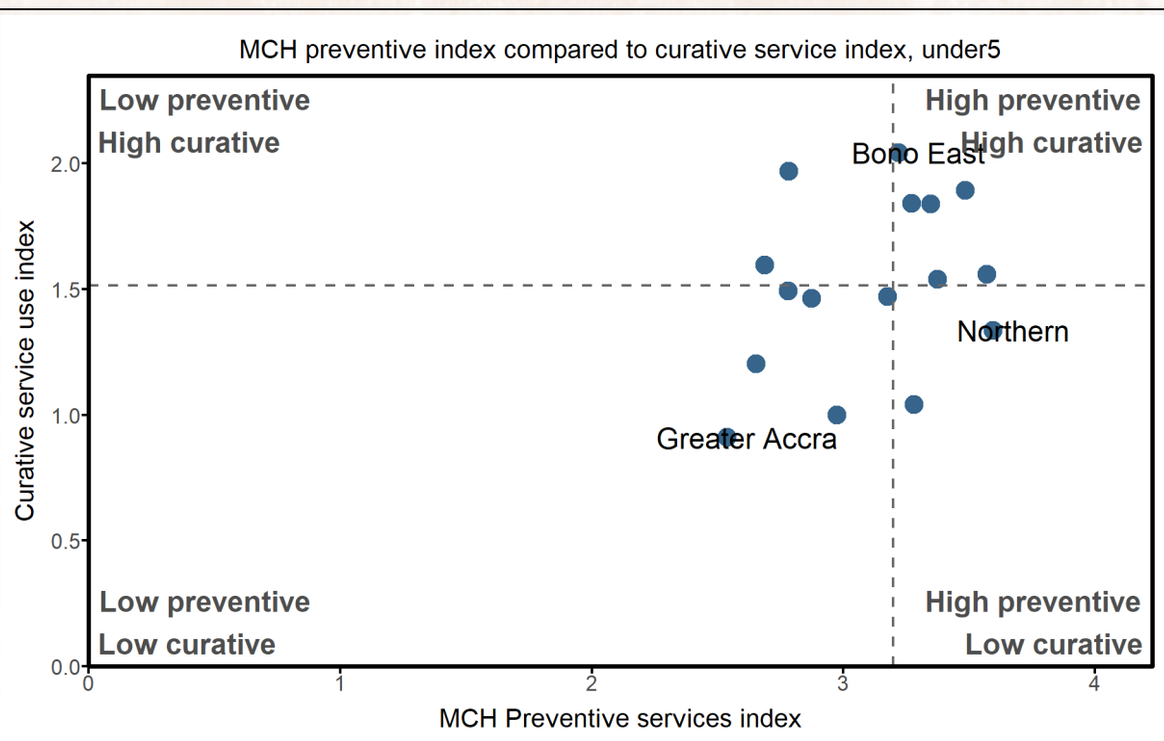


Interpretations

- Outpatient (OPD) visits for children under five have remained consistently above one per child per year, averaging 1.12, recovering from the dip recorded during the 2020 COVID-19 pandemic.
- In patient admissions for children under 5 was 4.1 per 100 children during the pandemic in 2020, surging to 6.25 in 2021, before stabilizing in 2024 to 2025 (5.7 and 5.9)
- Major disparities persist between urbanized, highly resourced regions and remote or rural districts, despite the good national performance.
- Higher densities of health personnel, better road infrastructure, and functional national health insurance mechanism drive performance in top regions, while poor performing regions have poor facility densities and workforce, where families must travel long distances for primary care.

Regional/provincial service utilization

MCH Preventive vs Curative Index



Interpretations

This figure plots each region's use of preventive maternal and child services against its use of curative services for children under five. Dashed lines divide regions into four groups based on whether they fall above or below the national average on each measure. Most regions cluster near the average on both measures, with a mild tendency for the two to rise together. Regions using more preventive care also tend to use more curative care. Bono East is relatively high on both, Greater Accra is low on both, and Northern is close to average; no region combines very high preventive use with very low curative use, or vice versa.

The narrow clustering is itself telling: regions differ only modestly on both measures, rather than spreading across the full range of either scale. The mild positive association suggests the two move together rather than trading off, suggesting that regions do not appear to compensate for weak preventive coverage with more treatment, or vice versa. This points to a common underlying driver, such as overall access or care-seeking patterns, lifting or lowering use of all services together. Greater Accra's low position on both reflects its large private sector. Much of the care sought in the region is delivered by private facilities that do not report into the routine data, so recorded use understates actual use.

6. Health system progress and performance

Health system inputs

2024		
Indicator	**Value**	**Unit**
Health infrastructure		
Health facility density	3.4	per 10,000
Share of facilities that are hospitals	7.8	%
Hospital density	2.6	per 100,000
Inpatient bed density	10.0	per 10,000
Health workforce		
Health workforce density	28.1	per 10,000
Skills mix ratio nurse-midwives per physician	40.6	
Role of private sector		

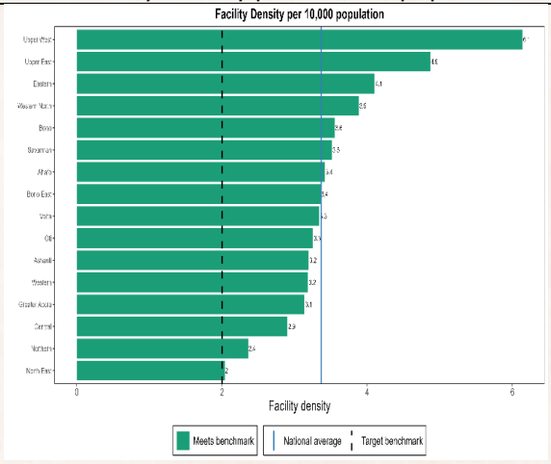
2024		
Indicator	**Value**	**Unit**
Share of Private facilities	18.2	%
Share of NGO facilities	0.0	%

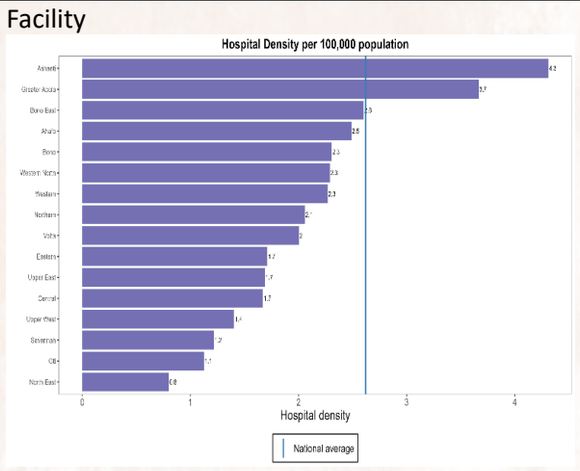
Interpretations

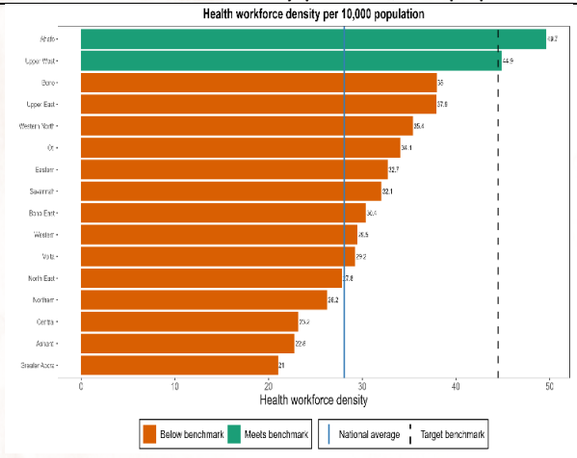
- In 2024, Ghana had approximately 3.4 health facilities per 10,000 people, above the WHO benchmark of 2 per 10,000. Hospitals account for 8% of facilities (2.6 per 10,000), with about 10 inpatient beds per 10,000 people. The health workforce stands at 28 skilled staff per 10,000 which is below the SDG benchmark of 44.5 with a nursing-weighted skill mix (41 nurses/midwives per physician). The private sector operates 18% of facilities. These figures point to a critical workforce gap: Ghana needs to scale up health worker production, addressing both numbers and skill mix, to meet the needs of a growing population.

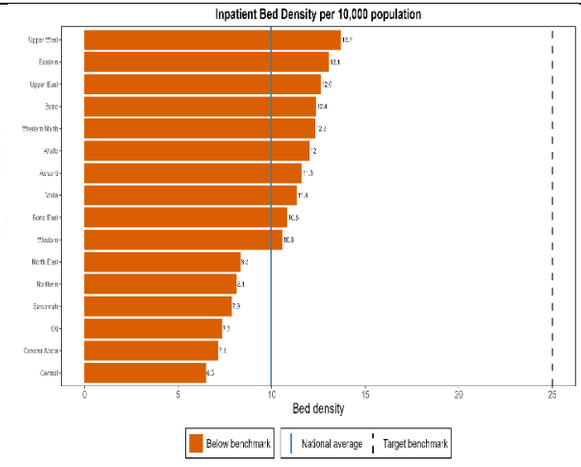
Health system inputs by region/province

Facility Density per 100,000 population | Hospital Density per 100,000 population | Health Workforce density per 100,000 population



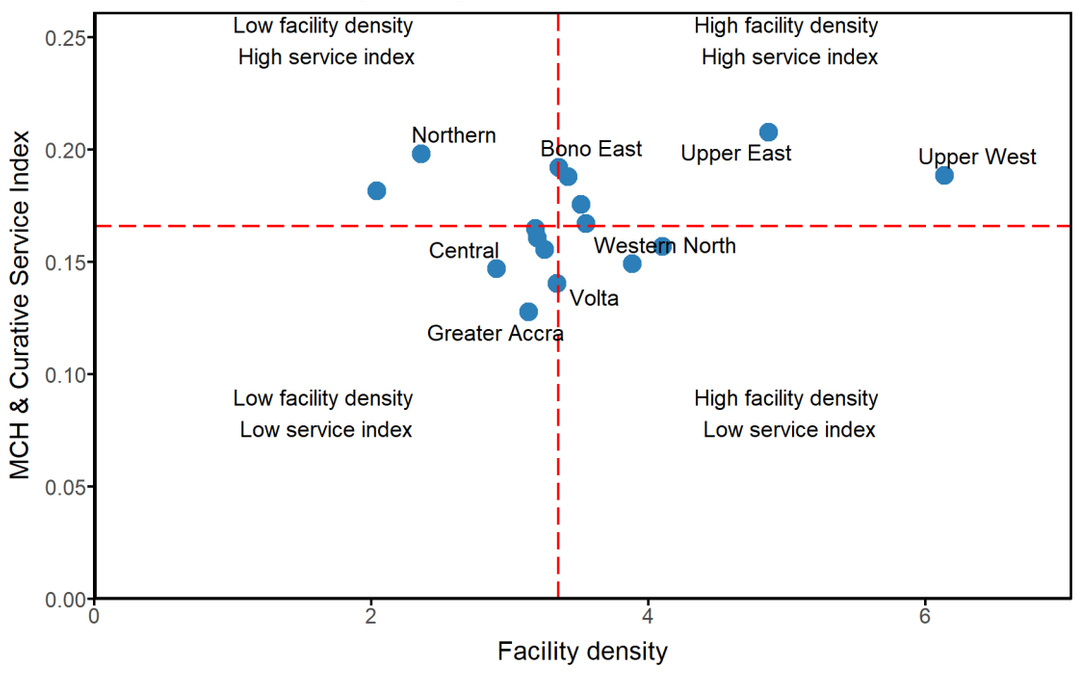






- Facility density meets the benchmark of 2 per 100,000 population in every region, with a national average of 3.4.
- Hospital density per 100,000 people varies widely across regions in Ghana, spanning from 0.8 in Northeast to 4.8 in Ashanti. Fourteen (14) regions fall below the national average, the 2 most populous regions Greater Accra and Ashanti having 3.7 and 4.2 respectively.
- Except for Ahafo (49.7) and Upper West (44.9), all regions fall short of the health workforce benchmark of 23 per 100,000 population. Ghana has been experiencing mass exodus of health workforce abroad, nurses and midwives been hardest hit.
- Greater Accra and Ashanti are the most populous. Even though quality of heath care is better compared with other regions, the sheer population numbers affect the health worker density. Northeast and Oti Regions are new regions that are part of the 6 new regions created in 2018 and share similar challenges in health infrastructure and workforce.

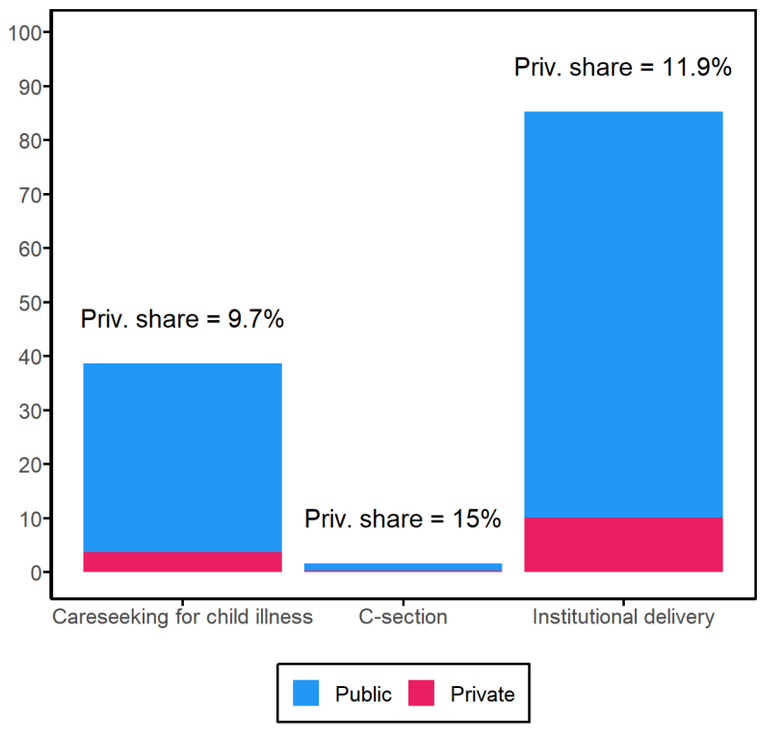
Health system outputs by inputs at the subnational level

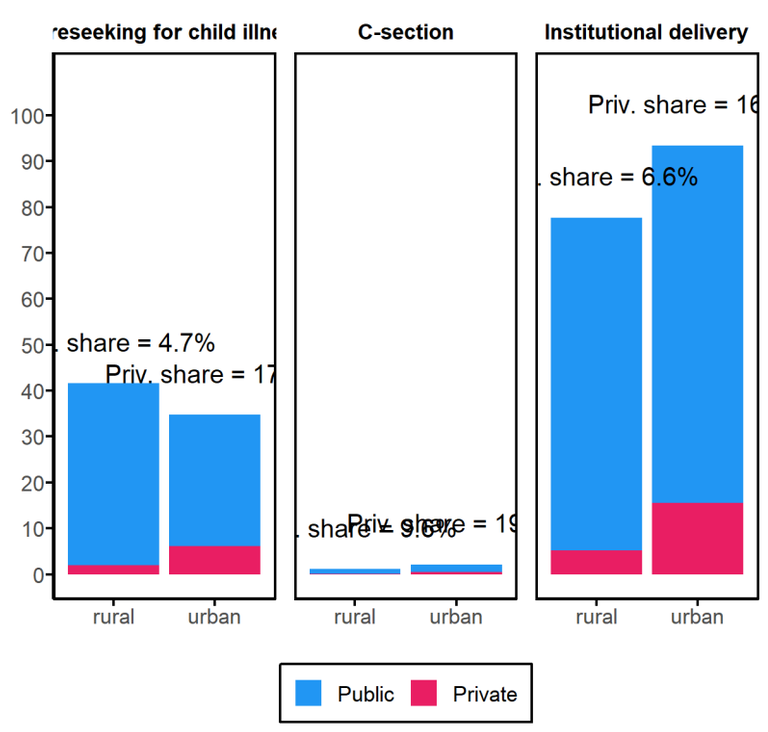


Interpretations

- Upper East and Upper West combine relatively high resources with high service scores, while Greater Accra and Central are low on both. Northern is a notable exception, recording a high service score despite middling resources. The association between resources and service use is real but loose, so resource levels alone do not fully explain how well a region's primary care system performs.
- The stronger link with workforce than facility density echoes evidence that a density of about 44.5 skilled health workers per 10,000 is needed to make good progress on SDG 3; notably, regional facility density alone did not fully explain under-five OPD use, reinforcing that resource levels are necessary but not sufficient for good primary-care performance.
- Greater Accra Region, housing the regional capital has a lot of facilities and is expected to in a high facility density quadrant. This may probably be due to poor private health facility data capture and subsequent reporting.

Private sector and RMNCAH services





Interpretations

- Ghana's health delivery system remains mainly public sector led, though the private sector has grown steadily, particularly in urban and regional capital areas, and this is reflected in RMNCAH service use as well. Because private-sector activity is not consistently captured in DHIS2, this growth increasingly affects the completeness of routine reporting, and strengthening private-facility reporting into DHIS2 should be prioritized.
- Price variation between private and public sector (higher in private), and the focus on curative mainly services by the private sector leads to accessibility of their services by those in the high wealth quintiles.

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