MINISTRY OF HEALTH
Republic of Liberia

University of Liberia

GLOBAL FINANCING FACILITY

Countdown to 2030
Women's Children's & Adolescent's Health

APHRC
African Population and Health Research Center
Transforming lives in Africa through research.

LIBERIA
SYNTHESIS REPORT

2026

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

Countdown to 2030 in partnership with Liberia`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 to the data before use to compute 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)	98	98	99	99	100	99
1b	% of districts with completeness of facility reporting >= 90	100	100	100	100	100	100
1c	% of districts with no missing values for the 4 forms	100	100	100	100	100	100
2. Extreme outliers (mean of ANC, delivery, immunization)							
2a	% of monthly values that are not extreme outliers (national)	99	100	100	100	100	98
2b	% of districts with no extreme outliers in the year	92	92	89	87	92	75
3. Consistency of annual reporting							
3a	Ratio anc1/penta1	1.14	1.14	1.05	0.94	1.01	0.92
3b	Ratio penta1/penta3	1.10	1.09	1.07	1.08	1.08	1.08
3c	% district with anc1/penta1 in expected ranged	67	67	40	13	33	13
3d	% district with penta1/penta3 in expected ranged	100	100	80	80	93	93
4	**Annual data quality score**	**94**	**94**	**87**	**83**	**88**	**83**

Interpretations

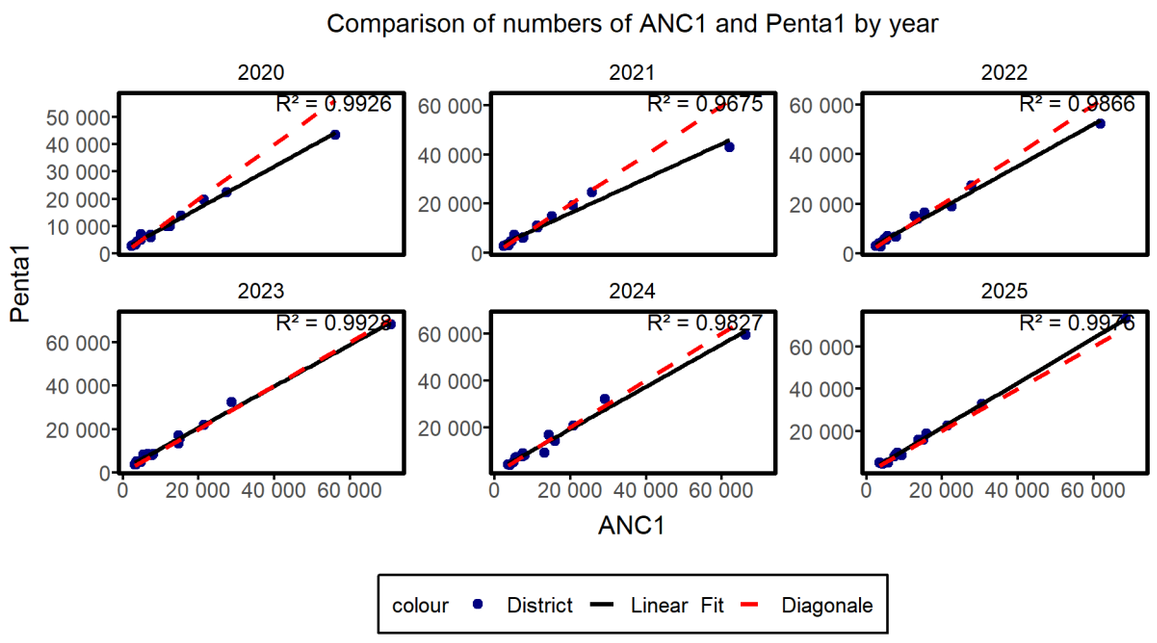
The annual data quality score shows a generally high but slightly declining trend over time. The score was 94 in 2020 and 2021. It declined from 87 in 2022 to 83 in 2023, before a slight recovery to 88 in 2024. The data then returned to 83 in 2025.

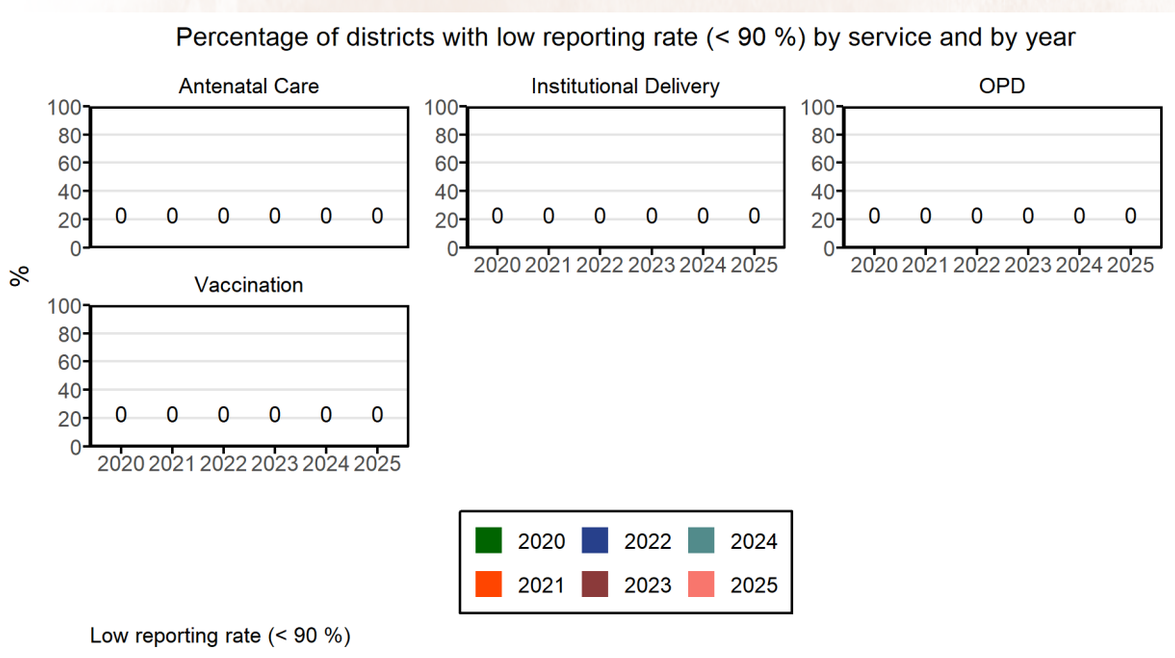
While the system maintains a moderately strong level of data quality, the trend indicates instability rather than continuous improvement, with a noticeable decline after 2021. This suggests that, although the health information system remains functional, there are emerging issues affecting consistency and reliability in recent years.

In response to fluctuating data quality scores, the MoH of Liberia has strengthened routine data quality audits and supportive supervision, standardized assessment tools, and HMIS/DHIS2 validation checks to improve accuracy and completeness. It has also enhanced staff capacity through regular training, reinforced data review meetings and feedback systems, and expanded digital reporting platforms to reduce paper-based errors and improve overall data reliability.

The analysis of extreme outliers shows that national-level data quality remains very strong and relatively stable over time, with the proportion of valid monthly values consistently between 99% and 100% from 2020 to 2024, and a slight decline to 98% in 2025

Despite a slight improvement in 2024, declining data quality scores indicate the need to strengthen data accuracy, consistency, validation, supportive supervision, and routine district data quality audits.





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 (Figures 2c and 2d). 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.

Total Livebirths

National Institutional Live Births

Subnational Institutional Live births

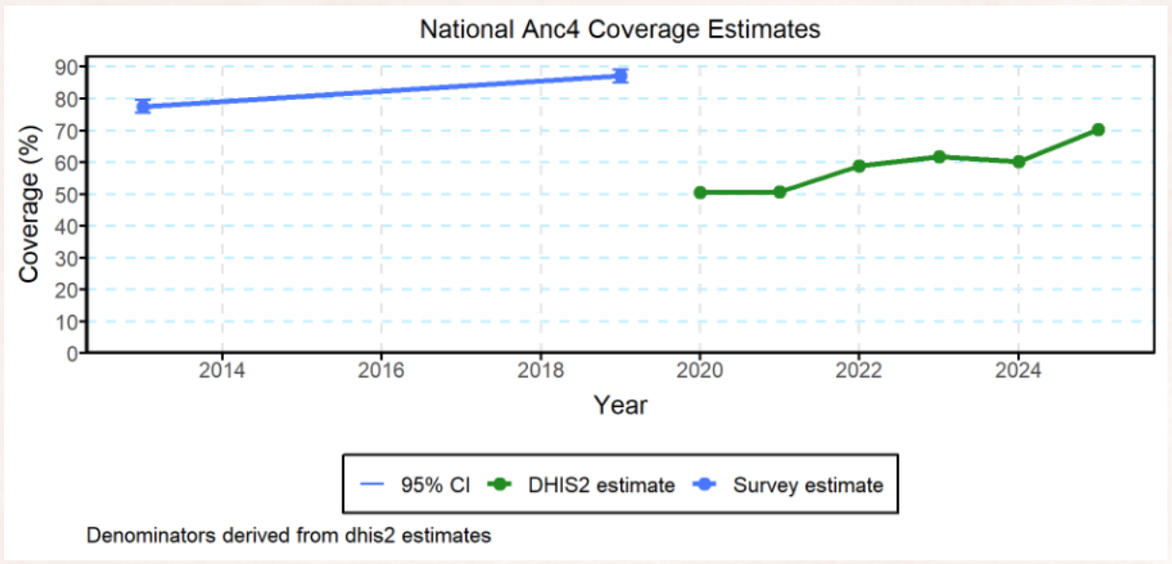
Interpretations

- Further comparison shows that DHIS2 projections are generally consistent with UN-based demographic indicators, including crude birth rate and crude death rate estimates. This overall alignment suggests that the DHIS2 denominators are demographically plausible, with particularly strong performance in live birth projections. This situation is critical for measuring maternal and child health coverage indicators.
- Antenatal 1 Visits Performed best at the national Level
- Liberia was used the ANC Growth for Maternal Health indicator and for Immunization, Penta 1 Population Growth was used. These selected denominators brought us closer to Survey Resul

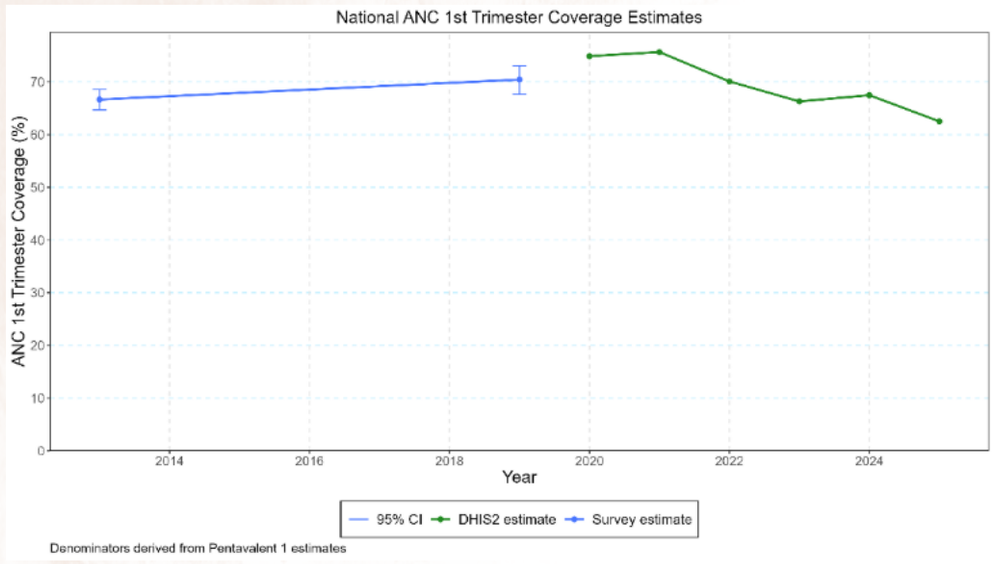
2. National Coverage Trends: Facility Data and Surveys

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

ANC 4

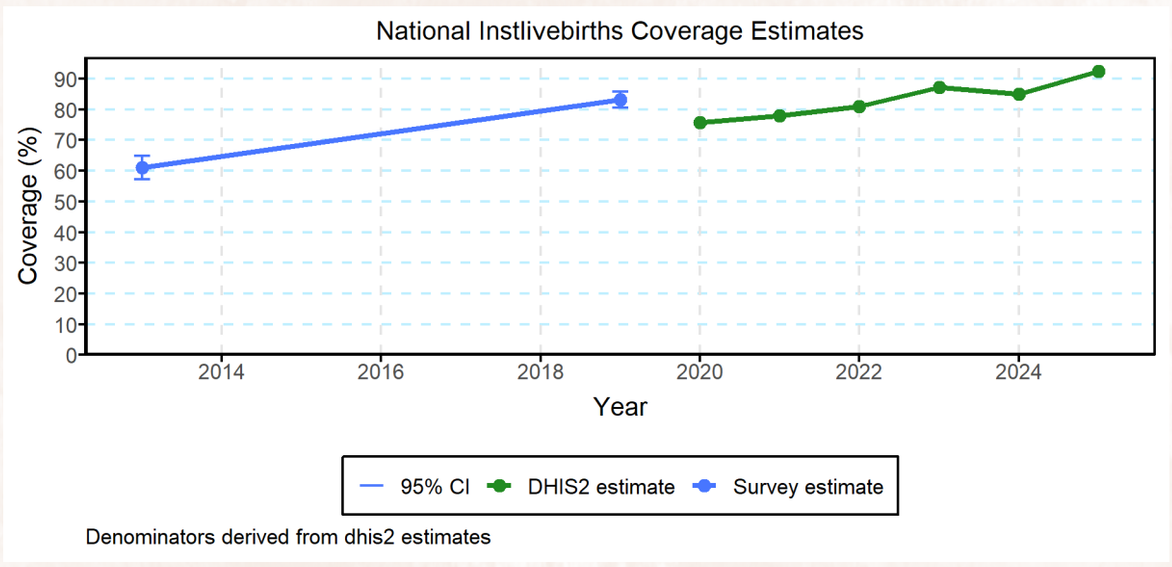


ANC early visit



Interpretations

- Household surveys show high ANC4+ and ANC1-1st trimester, coverage, with ANC4+coverage starting at ~78% (2013) rising to ~87% (2019), while DHIS2 (facility) estimates are much lower, climbing from ~50% (2020) to ~71% (2025). The two data sources diverge substantially in level, though both trend upward. Although both indicate improved service utilization, the large gap suggests the two sources are not directly comparable and should be interpreted cautiously.

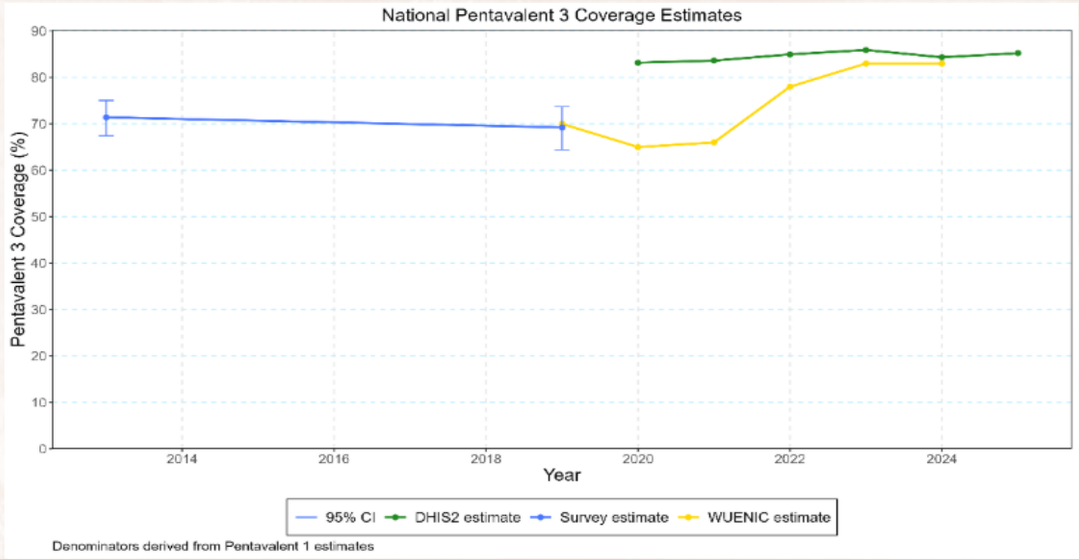


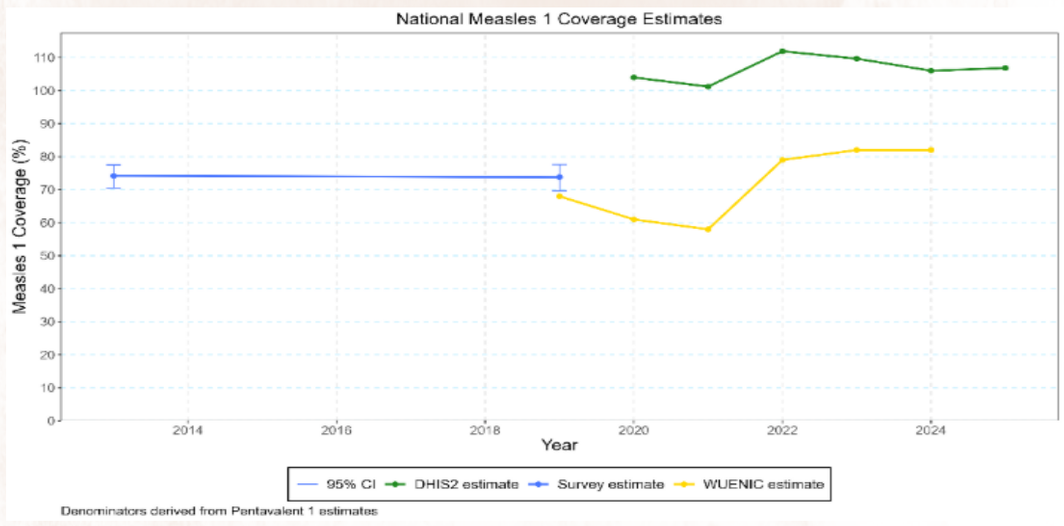
Interpretations

The national comparison between DHIS2 administrative data and household survey estimates for institutional live births in Liberia shows an overall increasing trend in both data sources, but with clear differences in magnitude and timing. DHIS2 estimates rose from 78% in 2020 to 94% in 2025, while household survey estimates increased from 60% in 2014 to 83% in 2019. Although both sources confirm improved use of facility-based delivery services, DHIS2 consistently reports higher coverage than survey data, indicating a persistent gap between administrative reporting and population-based estimates.

These differences are largely explained by methodological and health system factors. DHIS2 relies on facility reporting and population denominators that may be affected by outdated projections, population mobility, and inclusion of non-resident clients, as well as possible reporting inconsistencies. In contrast, household surveys are population-based and more representative but typically more conservative in estimating coverage. In Liberia, real improvements in skilled birth attendance, expansion of maternity services, strengthened referral systems, and increased community awareness likely contributed to actual gains, while data system limitations explain part of the observed differences. Strengthening denominator validation, improving routine data quality audits, and institutionalizing regular triangulation between DHIS2 and survey data are essential to improve accuracy, alongside better birth notification systems and enhanced supervision of facility reporting.

Immunization: Penta 3, Measles 1





Interpretations

The national comparison of Penta3 coverage in Liberia shows broadly consistent trends across DHIS2, survey, and WHO/UNICEF (WUENIC) modelled estimates, with a narrowing gap over time rather than a divergence. Survey estimates stood at ~71% (2013) and ~69% (2019). From 2020, DHIS2 estimates ranged from 83% to a peak of 86% (2023), easing slightly to 85% by 2025.

WUENIC estimates started lower, at ~65% (2020), but rose steadily to converge with DHIS2, reaching ~83–84% by 2023–2024. The overall pattern indicates improving alignment between administrative and modelled estimates over the period, rather than an implausible DHIS2 overestimate.

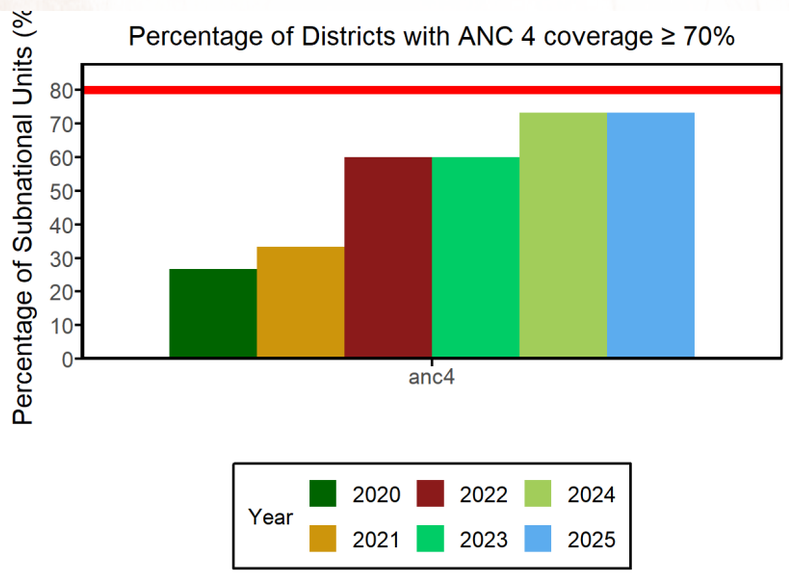
The residual gap between DHIS2 and WUENIC in the earlier years (2020–2021) most likely reflects differences in denominator assumptions and modelling adjustments rather than data quality failure. As reporting and denominator estimation have improved, the two sources have converged.

National Measles 1 coverage estimates also diverge across sources, with survey estimates holding steady at ~74% (2013 and 2019). DHIS2 estimates exceeded 100% in every year from 2020 to 2025, ranging from 101% (2021) to a peak of 112% (2022) before settling at 107% (2025). The consistent 100–112% DHIS2 values point to a modest, persistent denominator underestimate – potentially due outdated or underestimated population projections, as well as potential inclusion of non-resident children, double counting of doses, and inconsistencies in reporting within DHIS2.

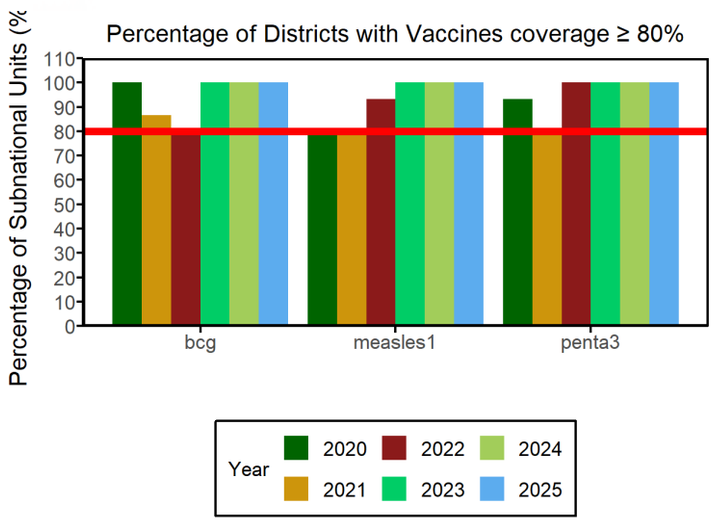
Improved reporting and catch-up vaccination campaigns may also have inflated numerator values. To address this, it is recommended to conduct a national denominator validation and harmonization exercise, strengthen routine data quality audits, improve child tracking systems (including electronic immunization registries), and institutionalize regular triangulation between DHIS2, survey, and WUENIC data to ensure more accurate monitoring and planning.

Percent of districts achieving high coverage targets

ANC 4



Child Health Indicators



Interpretations

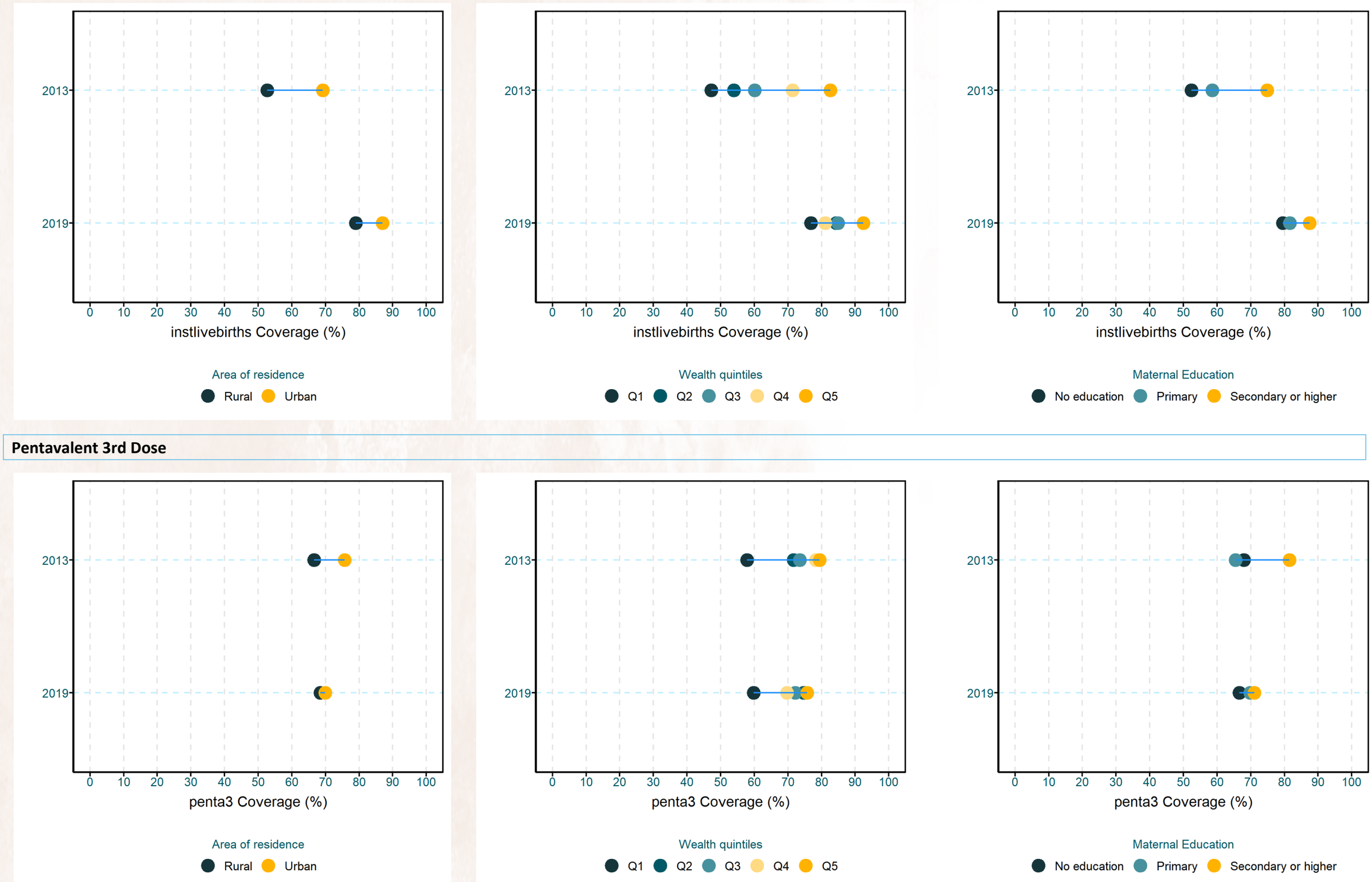
ANC4 coverage remained below the 80% national target despite steady improvement, rising from 25% (2020) and 30% (2021) to 60% (2022–2023) and 70% (2024–2025), indicating persistent gaps in completing four ANC visits. Low performance is driven by late ANC initiation, weak follow-up and tracking systems, and barriers such as distance, cost, and limited awareness, alongside service delivery issues like workload and incomplete reporting. Improvements require earlier ANC initiation, stronger client tracking and defaulter tracing, community-based follow-up, and better service availability and data quality.

Institutional deliveries rose from low levels in 2020–2021 to 80% in 2022–2024 and 90% in 2025, surpassing the national target and showing increased facility-based births. This improvement reflects better service delivery, awareness, and referrals, while earlier declines were likely due to disruptions. Sustaining progress requires stronger demand creation, 24/7 skilled care, improved referral/transport systems, and regular data quality checks

3. Equity

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

Institutional Live Births



Pentavalent 3rd Dose

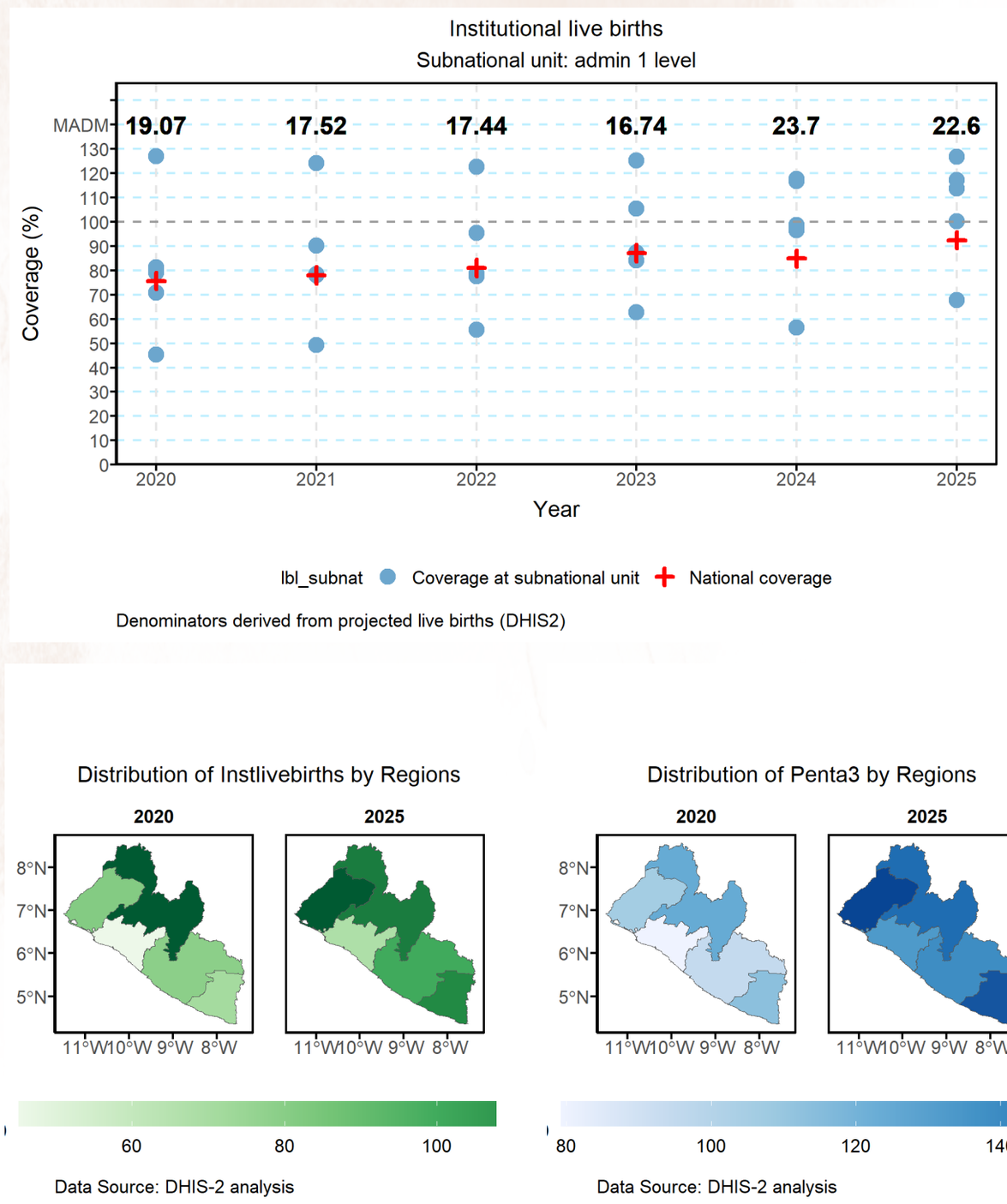
Interpretations

Institutional delivery and Penta3 coverage show marked reductions in inequality between 2013 and 2019–2020. Wealth-related gaps in institutional delivery fell from 38% to 15%, and education-related gaps from 23% to 10%. Penta3 gaps also narrowed, with wealth disparities reducing from 22% to 14% and education-related gaps from 6% to 3%.

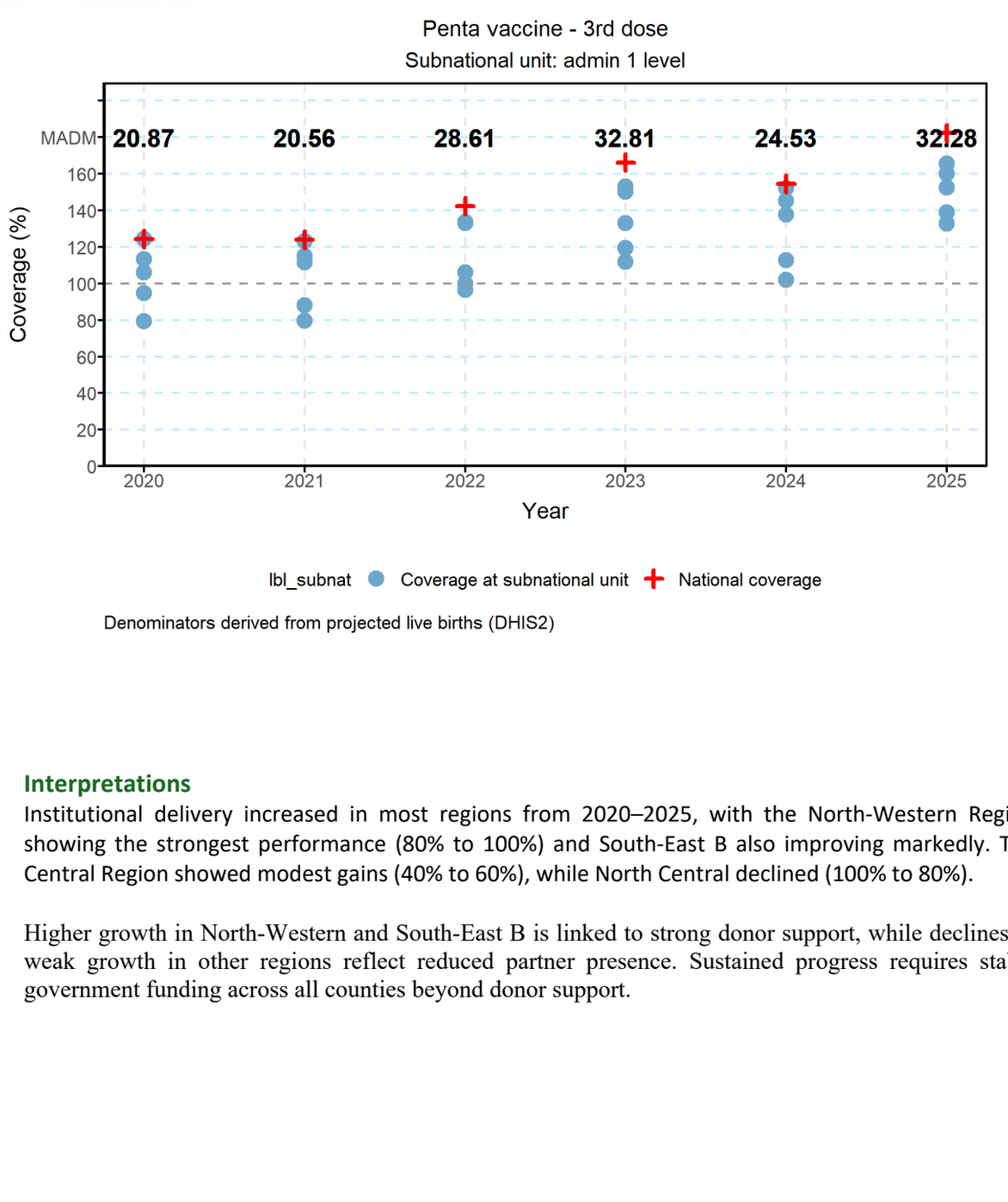
The wider inequalities in 2013 were largely driven by the Ebola outbreak, low service access, and socio-cultural barriers, particularly among poorer and less educated women. Improvements by 2019–2020 are associated with RMNCAH investments and IEC/advocacy interventions that improved access, awareness, and health-seeking behavior.

Geographical inequalities: Health facility data

Institutional Live Births



Pentavalent 3rd Dose



Interpretations

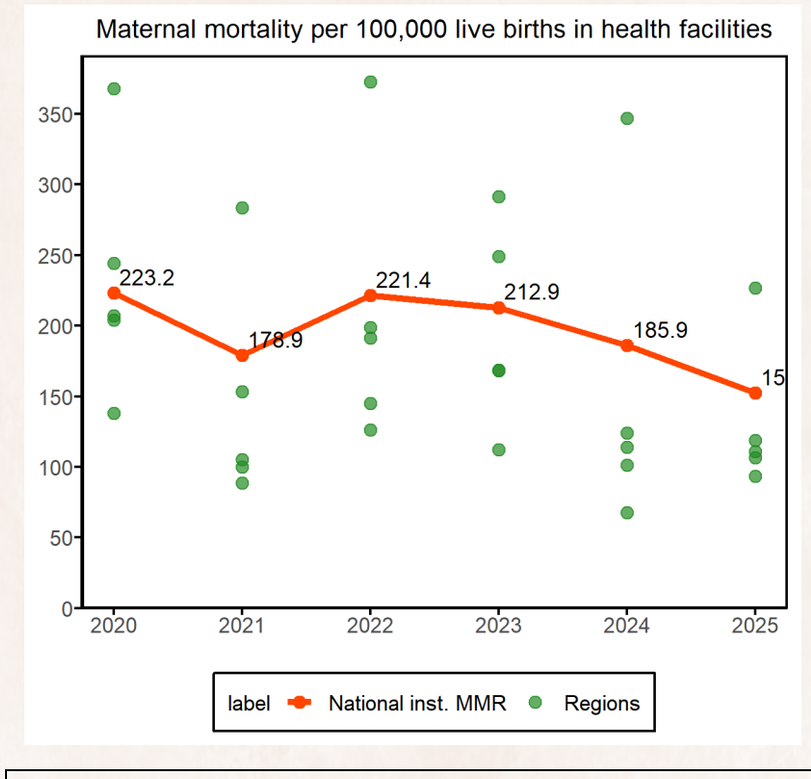
Institutional delivery increased in most regions from 2020–2025, with the North-Western Region showing the strongest performance (80% to 100%) and South-East B also improving markedly. The Central Region showed modest gains (40% to 60%), while North Central declined (100% to 80%).

Higher growth in North-Western and South-East B is linked to strong donor support, while declines or weak growth in other regions reflect reduced partner presence. Sustained progress requires stable government funding across all counties beyond donor support.

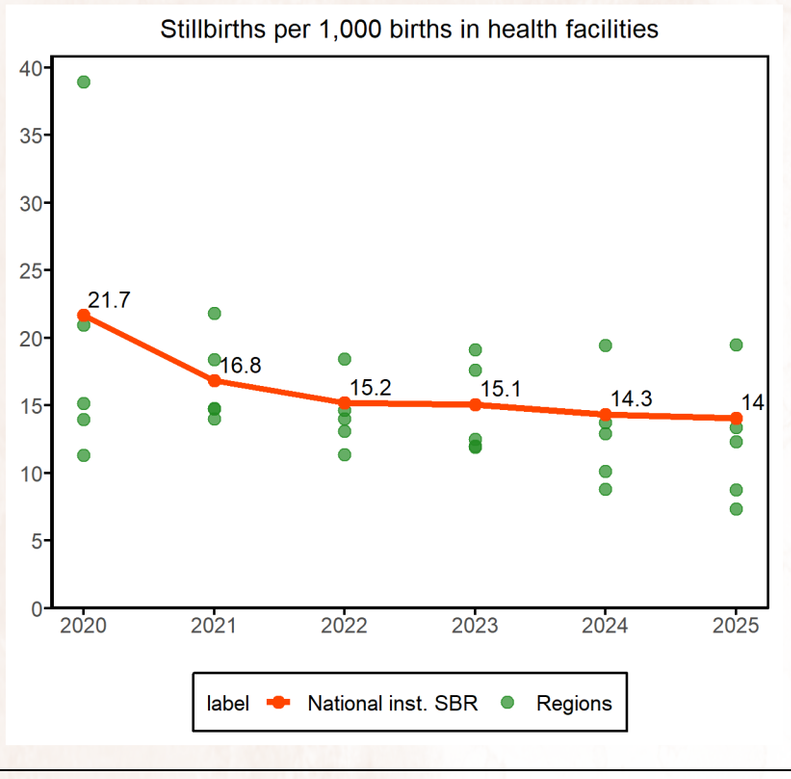
4. Institutional mortality

Institutional Mortality trends (iMMR, iSBR)

iMMR



iSBR

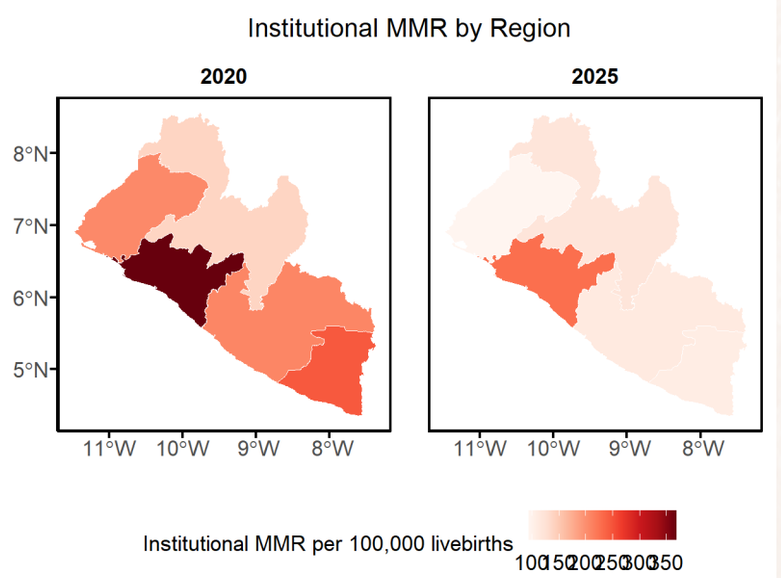


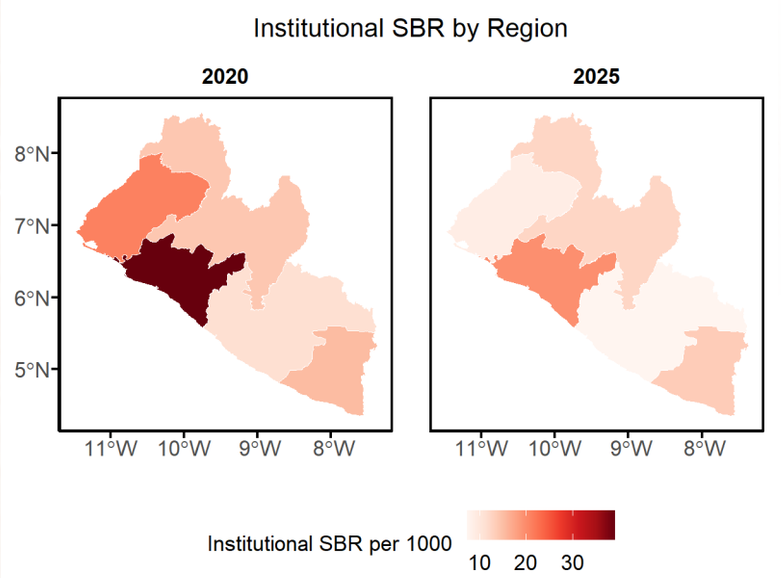
Interpretations

Maternal mortality in Liberia declined from 223.2 (2020) to 152.2 per 100,000 live births (2025), though regional disparities remain, with one region still above 200. Stillbirths also fell from 21.7 to 14.1 per 1,000 births, but subnational gaps persist.

Improvements are linked to strengthened EmONC services, skilled attendance, ANC uptake, and MDSR, while gaps stem from weak referral systems, workforce and commodity shortages, late care-seeking, and geographic barriers. Continued progress requires stronger EmONC, referrals, supplies, early ANC, workforce capacity, and robust perinatal death surveillance and data use.

Institutional Mortality by admin1 units





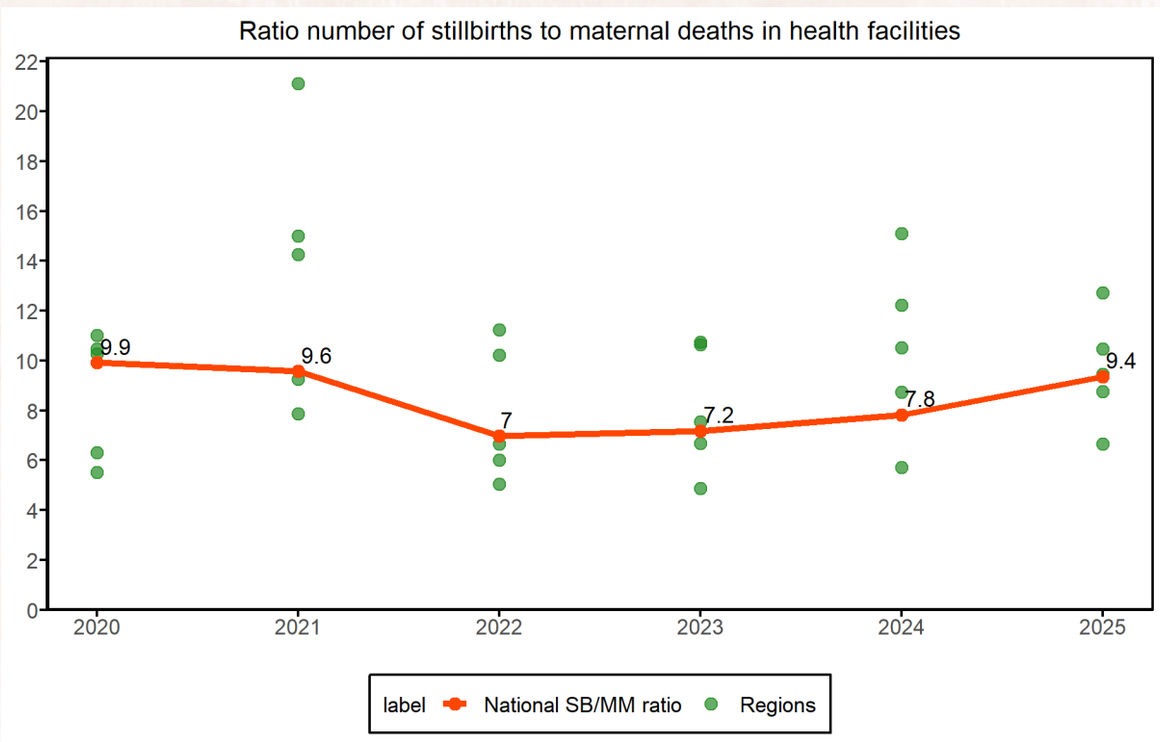
Interpretations

The SB/MM ratio in Liberia declined slightly from 9.9 (2020) to 9.4 (2025), with wide regional variation (about 8 to >20), indicating persistent geographic inequities in maternal and newborn outcomes. The stillbirth rate also improved from 21.7 to 14.1 per 1,000 births, though disparities remain across counties.

These patterns reflect improved EmONC services, skilled birth attendance, ANC uptake, and MDSR implementation, alongside ongoing challenges in referral systems, access barriers, and commodity shortages. Continued progress requires stronger EmONC, referral and transport systems, early ANC initiation, reliable supplies, and improved perinatal death surveillance.

Data quality metrics

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

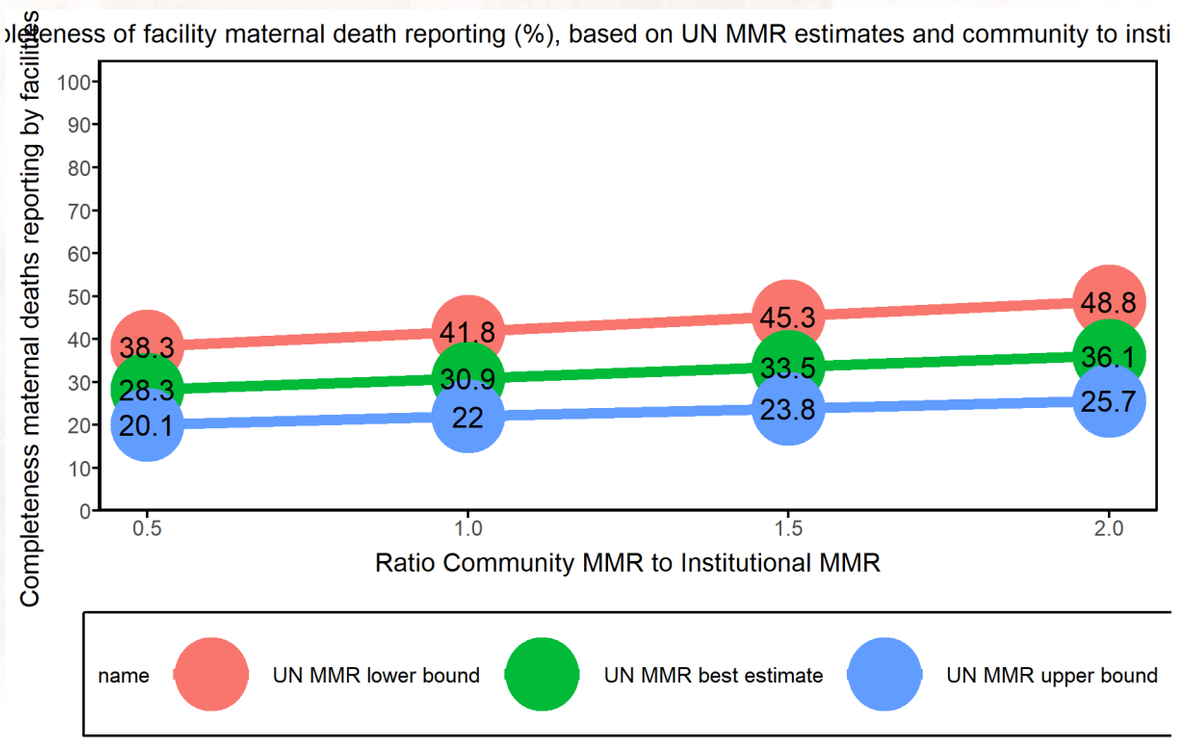


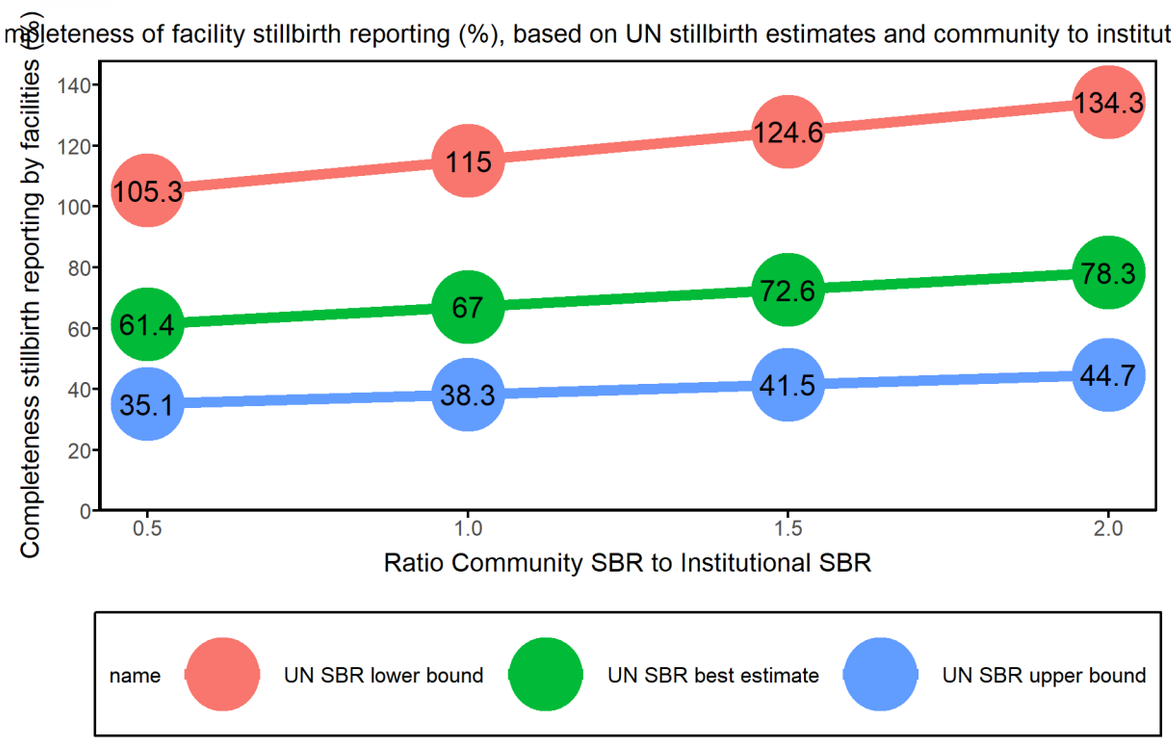
Interpretations

The national Stillbirth-to-Maternal Mortality (SB/MM) ratio in Liberia shows a slight decline from 9.9 in 2020 to 9.4 in 2025, indicating only marginal improvement over the period. The highest level was recorded in 2020 and the lowest in 2022. At subnational level, there are pronounced disparities, with some regions reporting ratios around 8, while others exceed 20, highlighting significant geographic inequities in maternal and newborn health outcomes.

These differences are largely driven by health system and contextual challenges, including limited access to quality emergency obstetric and newborn care in hard-to-reach areas, shortages of skilled health workers, weak referral and transport systems, and delays in accessing care. Contributing factors also include inadequate antenatal risk screening, late ANC initiation, and limited availability of essential medicines and equipment for managing obstetric and neonatal complications. In addition, inconsistencies in reporting and classification of stillbirths and early neonatal deaths may influence the observed variation. Addressing these challenges requires strengthening EmONC services, improving referral and ambulance systems, ensuring availability of essential commodities, enhancing health worker capacity, improving ANC quality and early attendance, and reinforcing data quality systems including MDSR and routine data validation, with targeted interventions in high-burden counties to reduce inequities.

Estimated completeness of facility maternal death and stillbirth reporting



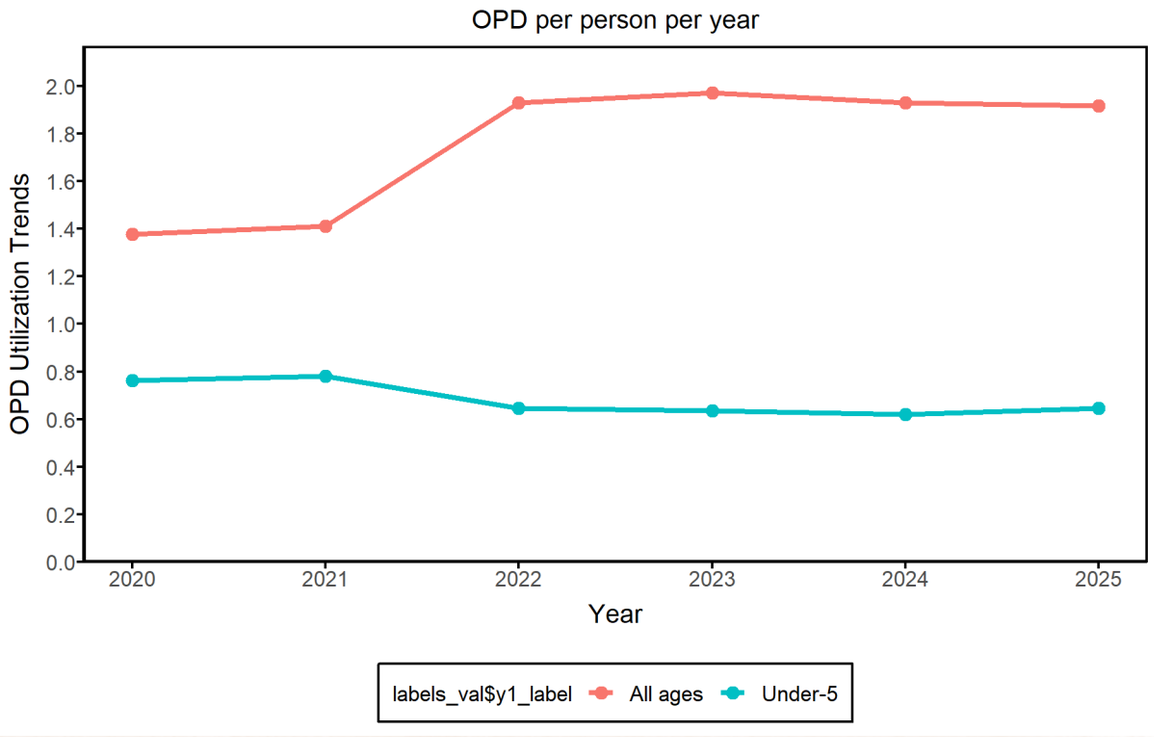


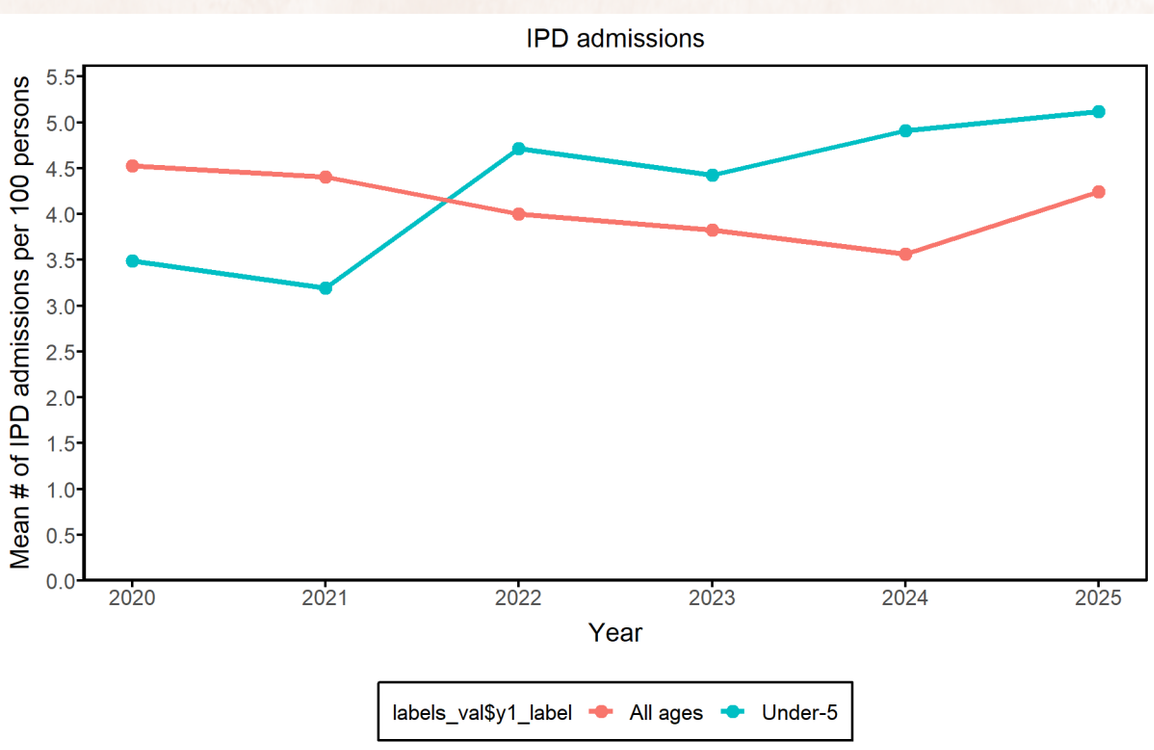
Interpretations

- Higher CIR values are associated with higher maternal mortality, reflecting persistent weaknesses in ANC coverage, skilled birth attendance, referral systems, and access to EmONC, compounded by workforce gaps, stock-outs, and geographic barriers.
- The Ministry of Health has responded by expanding EmONC services, strengthening midwifery training, improving referral and ambulance systems, scaling up MDSR, and improving commodities and ANC uptake. Priorities include equity-focused interventions, reliable supplies and transport, expanded midwifery-led care, and stronger real-time data use for decision-making.

5. Curative health service utilization for sick children

Outpatient and inpatient service utilization





Interpretations

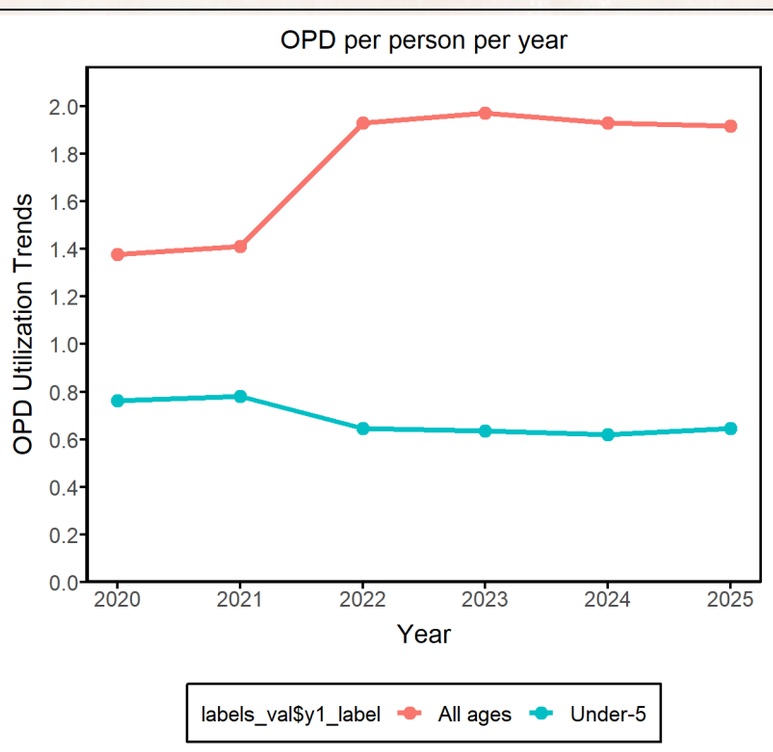
The decline in OPD utilization between 2020 and 2022, followed by a recovery from 2023 to 2025, is likely driven by a combination of health system disruptions, behavioral changes, and contextual factors such as reduced care-seeking, workforce constraints, limited service access, and possible shifts toward community-based care. The subsequent recovery reflects improved service availability, restored health system functionality, and increased confidence in facility-based services.

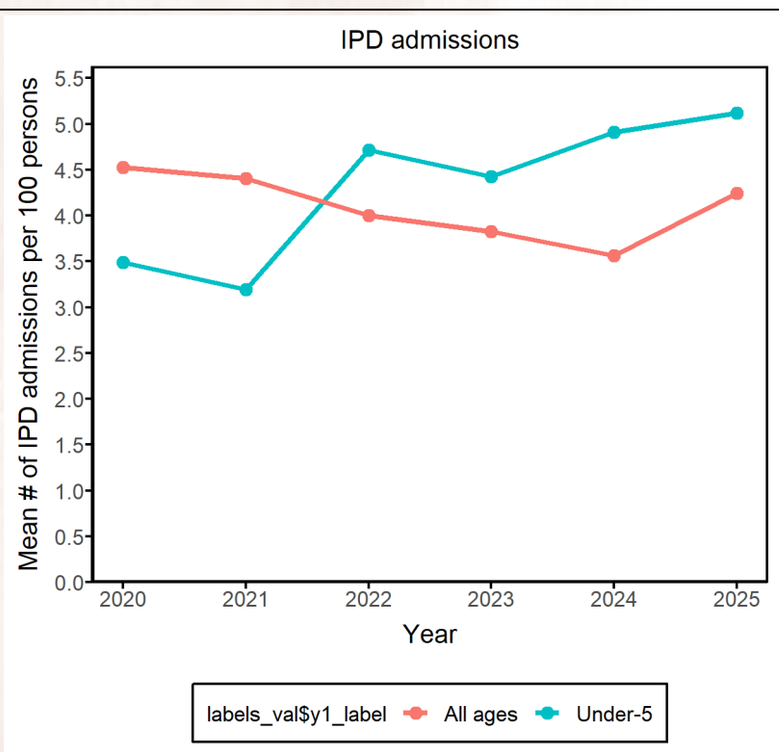
In response, the Ministry of Health of Liberia implemented several interventions, including expansion of primary healthcare services, strengthening of Community Health Assistant programs, improved outreach activities, and better supply chain management for essential medicines. These efforts were supported by supportive supervision, routine data quality assessments, continuous health worker training, and enhanced DHIS2 monitoring. To sustain these gains, further efforts are needed to strengthen community engagement, expand outreach in underserved areas, improve facility readiness, and institutionalize routine monitoring of service utilization to enable early detection and response to declines.

The divergent trends in inpatient department (IPD) admissions for all ages and under-five children reflect a combination of epidemiological changes, service utilization patterns, and health system performance factors. Among all age groups, the decline in admissions between 2020 and 2024 may be linked to improved outpatient management of illnesses, reduced disease severity, or barriers to access such as cost, distance, and occasional service disruptions. The rebound observed in 2025 likely indicates recovery in health service delivery, improved utilization of hospital services, and a possible increase in adult morbidity following earlier periods of reduced admissions.

In contrast, the steady increase in under-five admissions from 2022 onward suggests a rising burden of childhood illnesses such as malaria, pneumonia, and diarrheal diseases, as well as improved referral systems and better identification of severe pediatric cases. Health system responses have included strengthening IMCI, expanding Community Health Assistant programs, improving referral systems, and enhancing essential medicine availability, alongside improvements in DHIS2 reporting. However, the persistent rise in pediatric admissions highlights the need for stronger early case detection, improved emergency referral and transport systems, consistent service availability, and expanded preventive interventions such as immunization and malaria control.

Regional/provincial service utilization



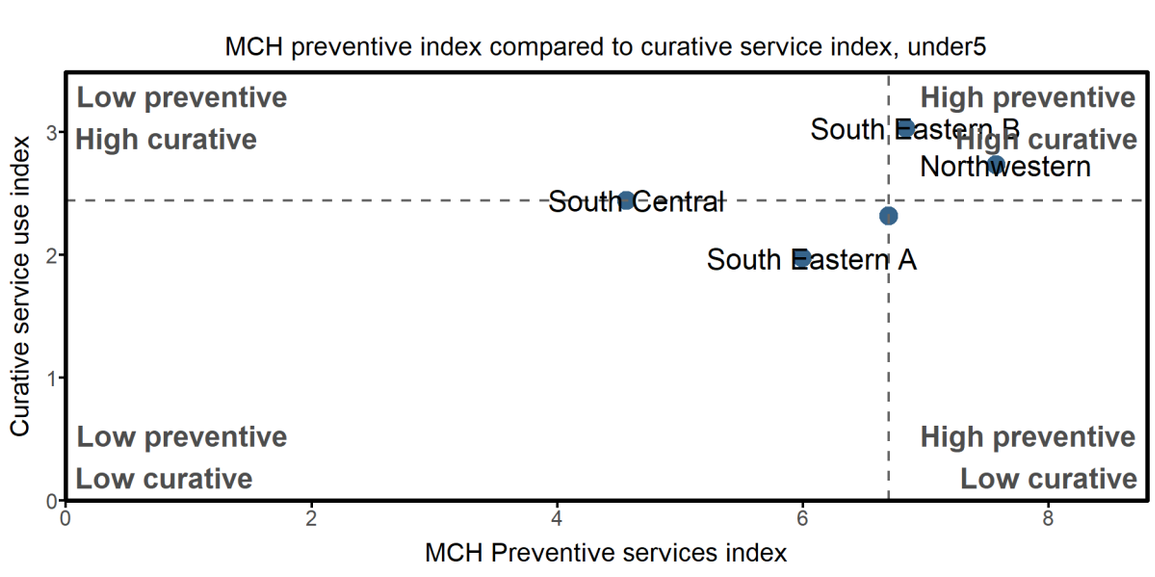


Interpretations

Under-five OPD utilization increased from 2020-2025, reflecting improved access to child health services, stronger care-seeking, expanded outreach, and better reporting, with higher levels in regions with stronger service delivery and lower levels in underserved areas. The MoH has responded through IMCI expansion, Community Health Assistant programs, immunization and outreach services, supply chain improvements, supervision, and DHIS2-supported data quality efforts; continued focus is needed on equity, outreach, facility readiness, and referral systems.

Under-five IPD admissions also increased across all regions, driven by higher childhood disease burden (malaria, pneumonia, diarrhea), improved detection, referral systems, and reporting, with regional variation reflecting differences in access and system capacity. Key interventions include strengthening IMCI, community programs, malaria prevention, immunization, referral systems, and data reporting, alongside priorities to expand preventive services, improve emergency transport, and address regional disparities.

MCH Preventive vs Curative Index



Interpretations

Regional variation in maternal and child health (MCH) performance reflects differences in health system strength and service integration. South Eastern B and the Northwestern Region perform well in both preventive and curative services, likely due to stronger health systems, better referral networks, improved clinical capacity, and reliable access to essential medicines. In contrast, South Eastern A and South Central show high preventive but low curative performance, indicating gaps in case management, referrals, facility readiness, and access to treatment, possibly compounded by staffing shortages, geographic barriers, or under-reporting.

To address these gaps, the Ministry of Health-Liberia has implemented IMCI, Community Health Assistant programs, strengthened referrals, improved supply chains, and enhanced supervision, supported by routine data quality assessments and DHIS2 monitoring. Further actions needed include targeted clinical mentorship, stronger emergency referral and transport systems, equitable distribution of medicines and diagnostics, and expanded outreach linking prevention to treatment. Focused supervision in low-performing regions is essential. Overall, sustaining progress requires ensuring curative services keep pace with preventive gains to achieve equitable MCH outcomes nationwide.

6. Health system progress and performance

Health system inputs

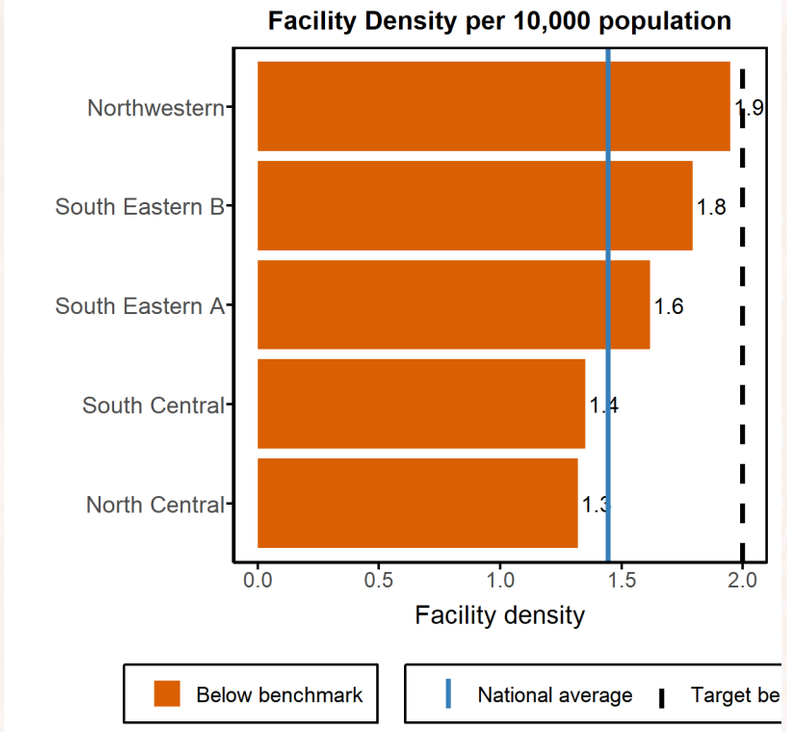
2024		
Indicator	**Value**	**Unit**
Health infrastructure		
Health facility density	1.4	per 10,000
Share of facilities that are hospitals	4.9	%
Hospital density	0.7	per 100,000
Inpatient bed density	5.7	per 10,000
Health workforce		
Health workforce density	18.7	per 10,000
Skills mix ratio nurse-midwives per physician	5.3	
Role of private sector		
Share of Private facilities	32.9	%
Share of NGO facilities	8.2	%

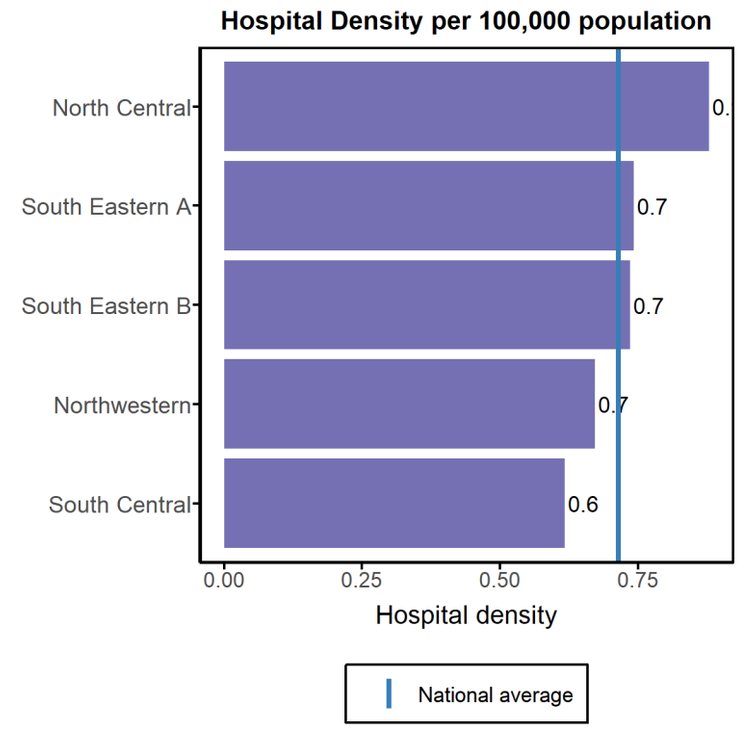
Interpretations

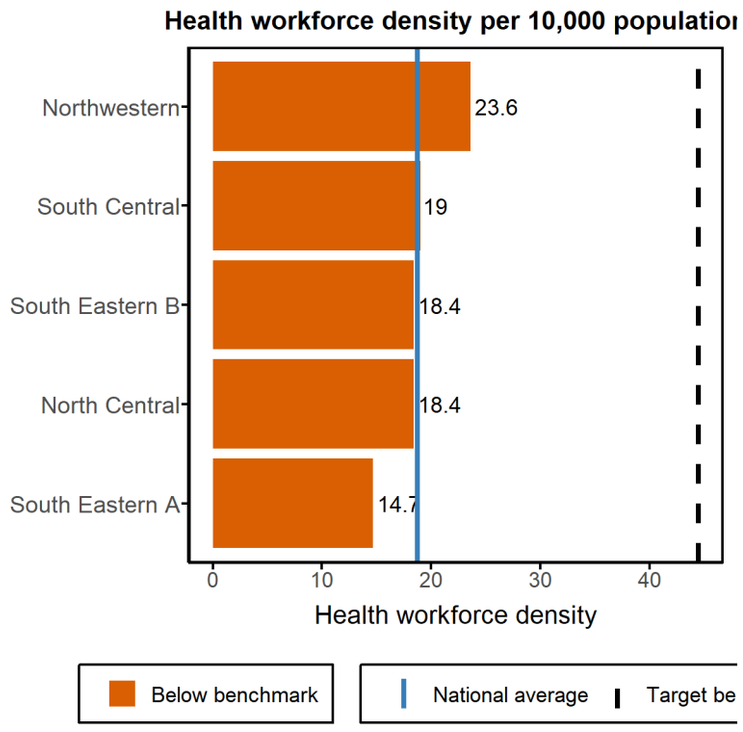
In 2024, Liberia's health facility density 1.4 per 10,000 populations, with hospitals at 4.9% and a bed ratio of 5.7 per 10,000. These are aggregate measures and do not reflect actual access, which is limited by rural-urban disparities.

Access to hospitals and beds is lower in rural areas due to distance, poor roads, and financial barriers, despite some regions falling below WHO standards. Expanding comprehensive health centers and improving rural service availability is needed to improve equitable access to higher-level care.

Health system inputs by region/province



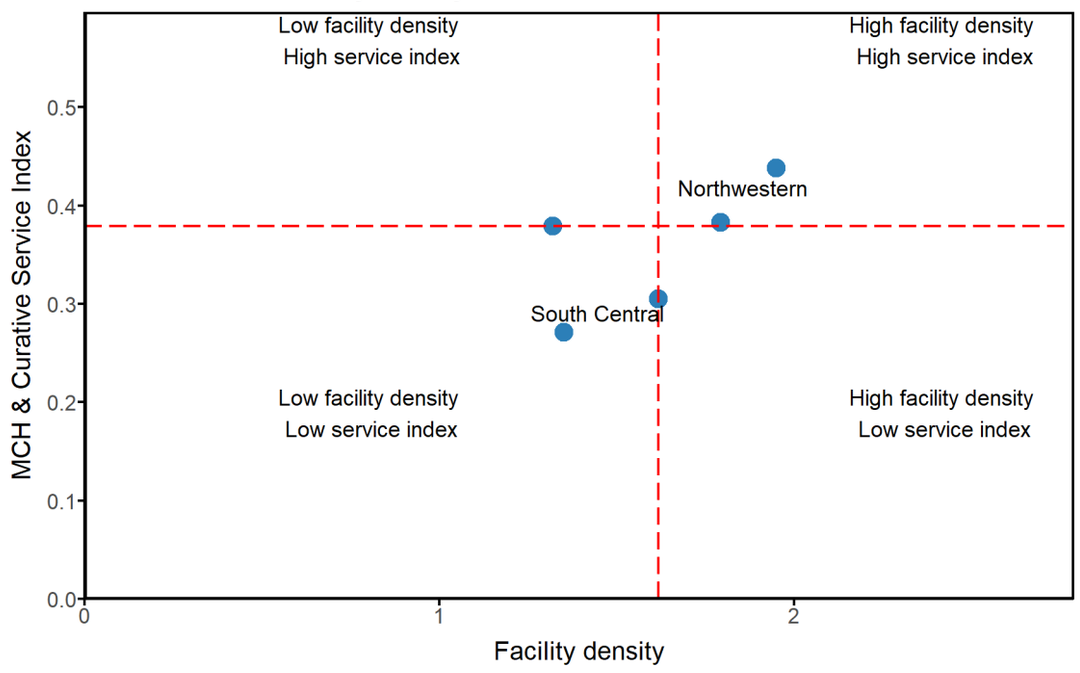




Facility density per 10,000 population shows the North Western Region closest to the benchmark at 1.9, followed by South Eastern B (1.8), South Eastern A (1.6), South Central (1.4), and North Central (1.3). Hospital density per 100,000 populations is highest in North Central (0.9), while South Eastern A and B each record 0.7, and South Central records the lowest at 0.6. Health workforce density per 10,000 population remains below benchmark across all regions, with North Western highest at 23.6, followed by South Central (19), South Eastern B (18.4), North Central (18.4), and South Eastern A (14.7). Liberia Patient-bed density per 10,000 populations for all regions fall below the benchmark with North Central achieving the highest of 8.3 and South Central 3.7.

These disparities are driven by uneven facility distribution and workforce shortages linked to urban-centered investment, high infrastructure costs, weak rural systems, fragmented planning, limited training output, retention challenges, and weak human resource for health (HRH) management. Addressing them requires needs-based facility expansion, rural hospital upgrades, there is also a Public-private partnership (PPPs), stronger training and recruitment, task shifting, mandatory rural service, and improved retention incentives, alongside strengthened referral systems. Long-term solutions include a national workforce master plan, rural retention packages, stronger county governance, digital health expansion, increased domestic financing, and continuous equity monitoring within a coordinated, equity-focused decentralization strategy.

Health system outputs by inputs at the subnational level

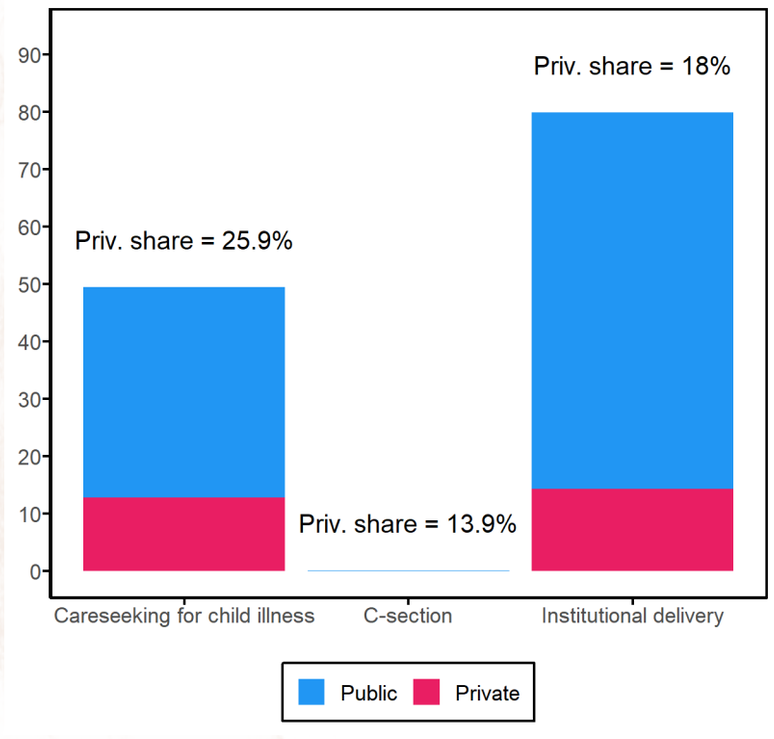


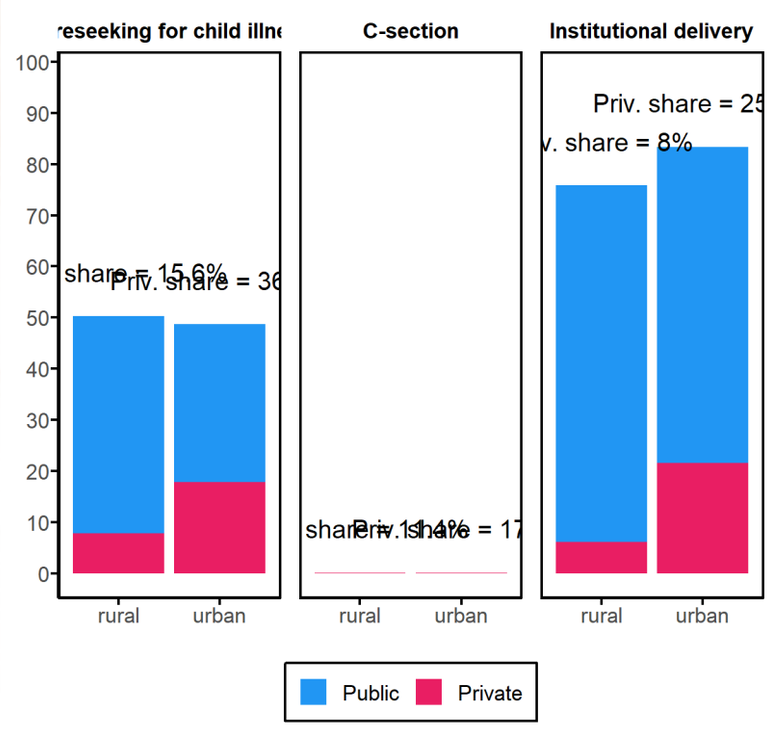
Interpretations

Facility density and service performance in Liberia show clear regional clustering. North Western and South Eastern B perform well with both high facility density and strong MCH/curative services, while South Eastern A shows weak performance despite high facility density, indicating inefficiencies. South Central and North Central combine low facility density with low service performance, reflecting structural gaps.

A similar pattern is observed in the workforce distribution, where North Central, South-Eastern B, and South Eastern A show relatively better alignment between staffing and service output. On the contrary, the South-Central region shows a mismatch between workforce levels and performance as shown in Figure…. These disparities reflect structural, geographic, and governance challenges. Key responses include workforce redistribution, primary health care (PHC) strengthening, facility upgrading, task shifting, improved supervision, supply chain and referral system reforms, performance-based financing, and stronger data-driven planning through DHIS2.

Private sector and RMNCAH services





Interpretations

Public facilities are the main providers of maternal and child health services in Liberia. They account for about 45–50% of childhood illness care, 70–80% of deliveries, and most C-sections, while the private sector contributes a smaller share, especially in rural areas.

This dominance reflects wider public facility coverage, free or subsidized services, and stronger referral systems under Ministry of Health of Liberia programs such as EPHS, BEmONC/CEmONC, and IMCI. Further improvements require continued rural investment, stronger referral systems, equitable staffing, and enhanced public–private partnerships to expand access and quality.

COUNTDOWN TO 2030

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