

Uganda

Country analytical team

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Analysis of reproductive, maternal,
newborn, child and adolescent health
indicators for 2020–2025

1Health facility data quality and denominators

Introduction: Routine facility data are central for monitoring RMNCAH service coverage and outcomes. Before interpretation, the data were reviewed for reporting completeness, missing values, extreme outliers, internal consistency and denominator plausibility. Survey estimates and ANC1/Penta1-derived denominators were used to judge whether routine estimates were plausible.

National Annual data-quality metrics

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	99	99	99	98	97
1b	% of districts with completeness of facility reporting >= 90	97	99	99	99	96	97
1c	% of districts with no missing values for the 4 forms	90	89	92	92	93	78
2. Extreme outliers (mean of ANC, delivery, immunization)							
2a	% of monthly values that are not extreme outliers (national)	98	100	97	98	99	84
2b	% of districts with no extreme outliers in the year	90	93	93	94	87	78
3. Consistency of annual reporting							
3a	Ratio ANC1 / Penta1	1.11	1.08	1.08	1.08	1.02	1.06
3b	Ratio Penta1 / Penta3	1.06	1.06	1.05	1.04	1.03	1.03
3c	% district with ANC1/Penta1 in expected range	79	70	69	68	60	64
3d	% district with Penta1/Penta3 in expected range	85	86	85	82	78	82
4	Annual data quality score	91	91	91	90	87	83

Overall data-quality score by region

Consistency: ANC1 versus Penta1

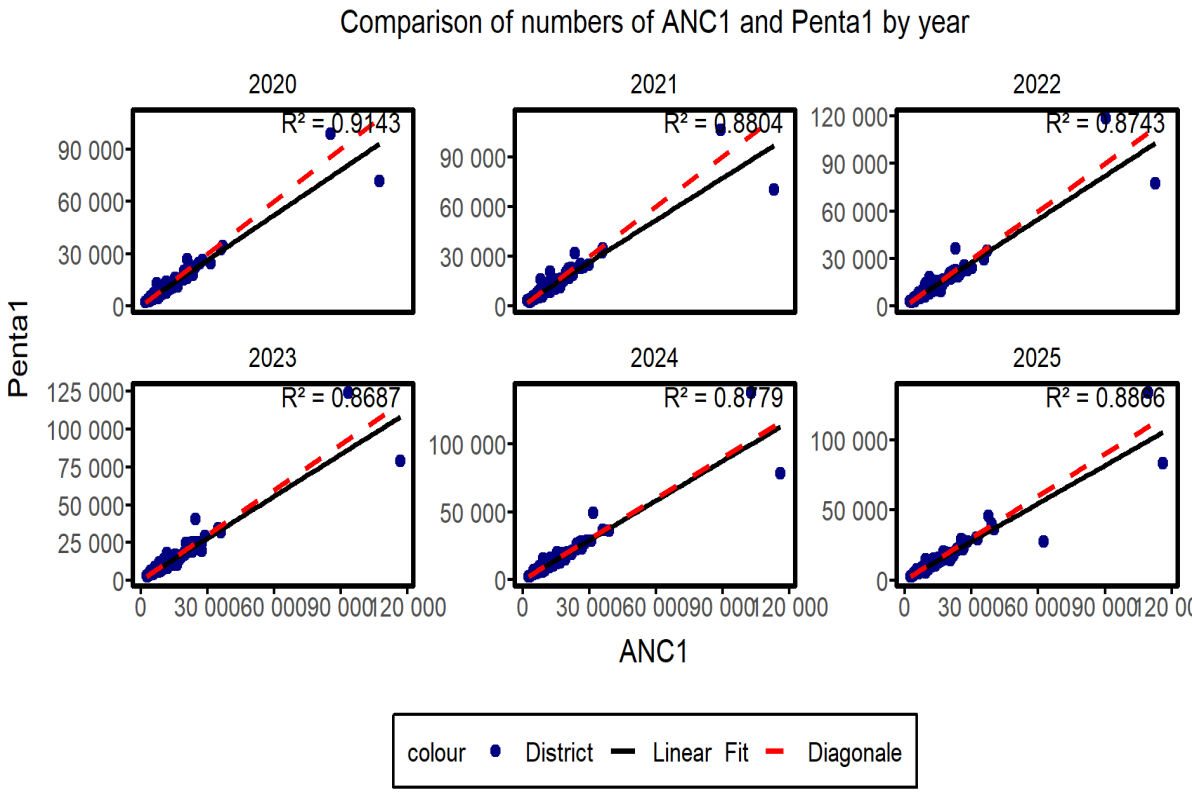
Overall data quality score by region						
Uganda, 2020–2025						
	2020	2021	2022	2023	2024	2025
Acholi	93	95	97	94	93	91
Ankole	84	86	89	86	79	75
Bugisu	88	89	83	86	87	85
Bukedi	97	95	96	95	88	86
Bunyoro	95	96	94	93	92	90
Busoga	95	93	90	90	90	85
Kampala	98	85	99	99	98	94
Karamoja	88	82	87	91	92	83
Kigezi	82	86	86	82	78	69
Lango	92	93	89	92	84	79
North Central	92	94	95	93	91	86
South Central	94	92	90	90	86	83
Teso	93	91	85	91	87	84
Tooro	86	87	92	89	82	80
West Nile	92	90	96	92	91	87

Poor (<80%)

Moderate (80–89%)

Good (≥90%)

Green indicates good data quality (≥90%); yellow indicates moderate data quality (80–89%); red indicates poor data quality (<80%).

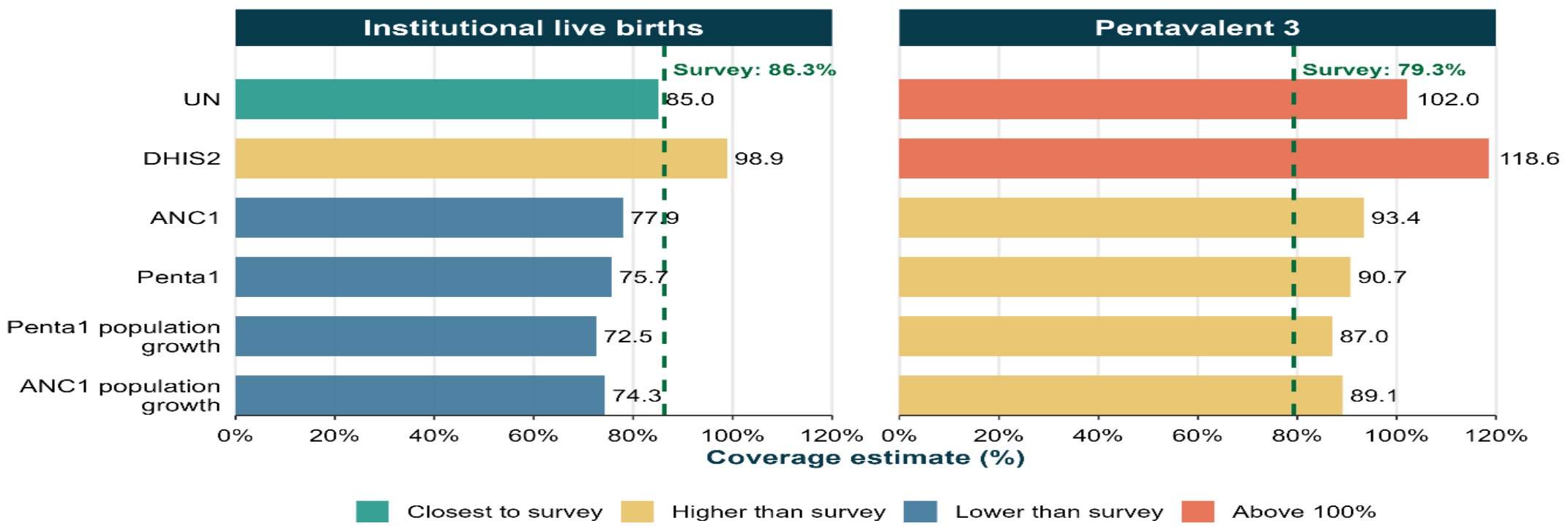


- Reporting completeness remained high nationally (97-99%), but districts with no-missing values and extreme outliers (were more) performance weakened in 2025.
- Annual data quality score fell from 91% in 2020-2022 to 83% in 2025
- Regional heatmaps flag Ankole, Kigezi and Lango for review.
- ANC1 and Penta1 remain closely aligned, supporting adjusted routine numerators.

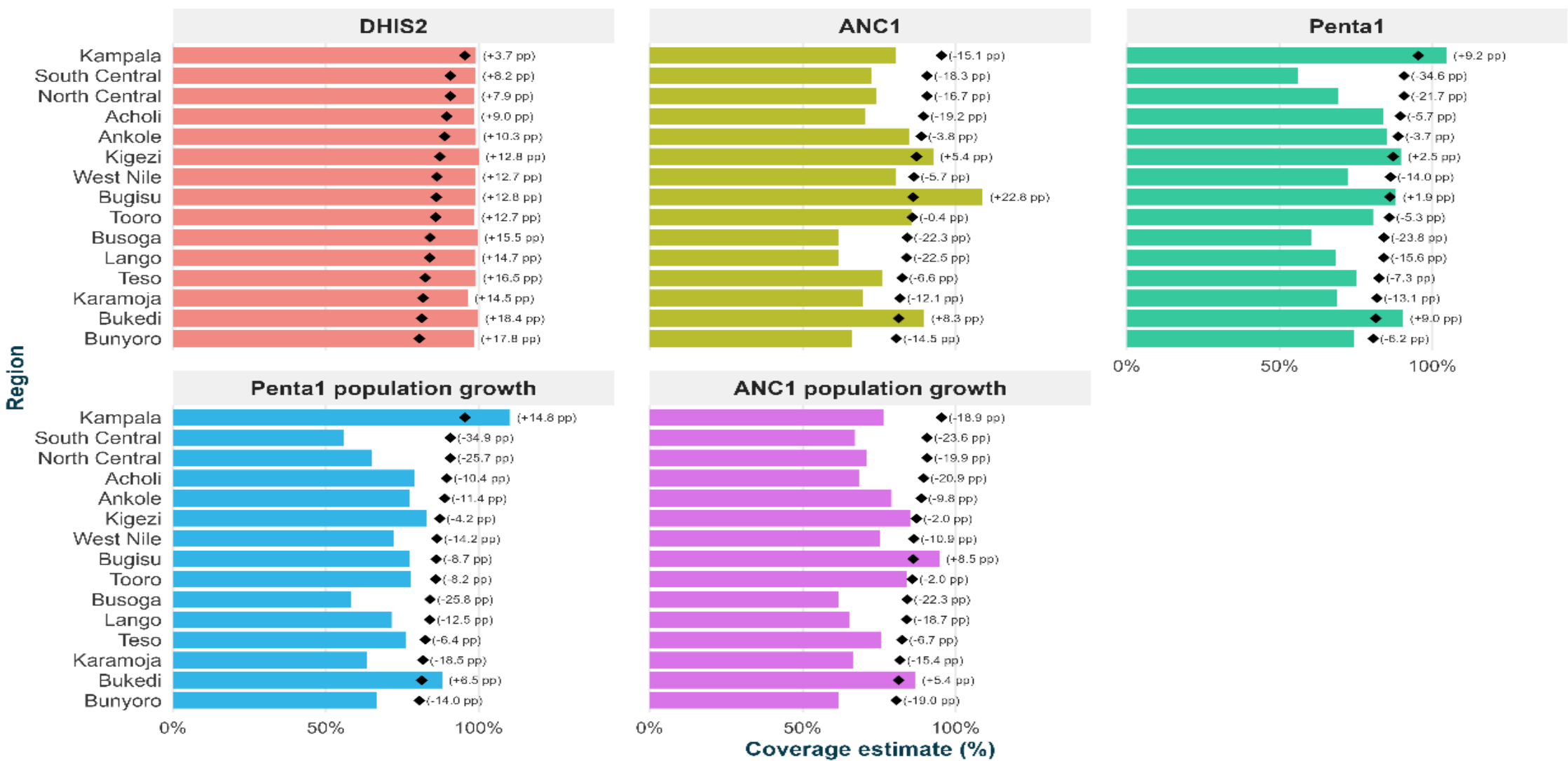
Recommendations

- Overall data quality declined in 2024-2025, primarily due to missing values and increasing outliers. This requires further investigation and prompt follow up to address causes of these data quality challenges

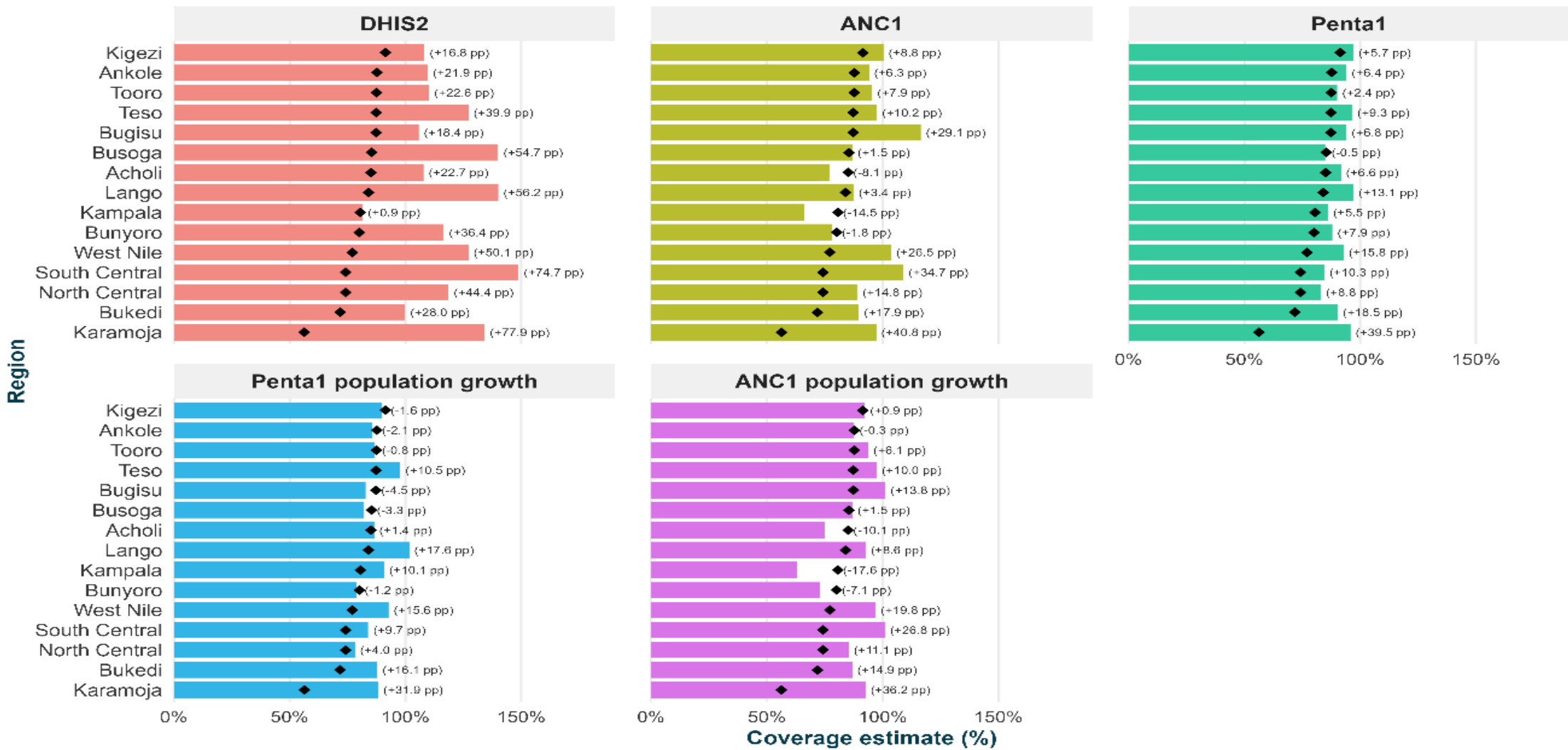
National denominator checks



Institutional live births: subnational denominators



Penta3: Subnational denominators



Denominator message

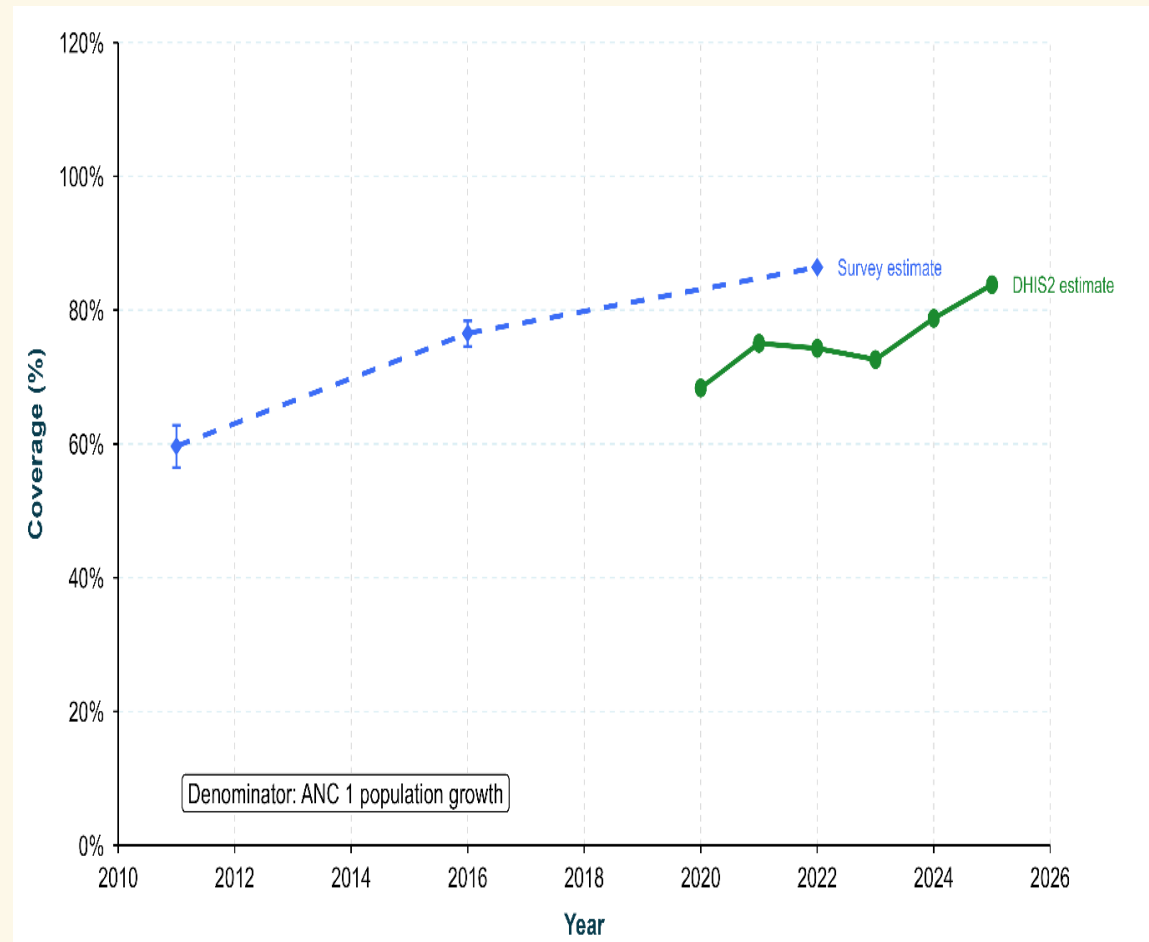
DHIS2 denominators tend to push coverage estimates above plausible levels; ANC1/Penta1-derived denominators align better with survey benchmarks. DHIS2 denominators produce higher estimates than survey benchmarks for both institutional live births and Penta3, with Penta3 exceeding 100%. Adjusted denominators based on ANC1/Penta1 and population growth appear more plausible, but subnational results still vary widely, indicating that denominator issues are not only national but also regional/district-specific.

Recommendations

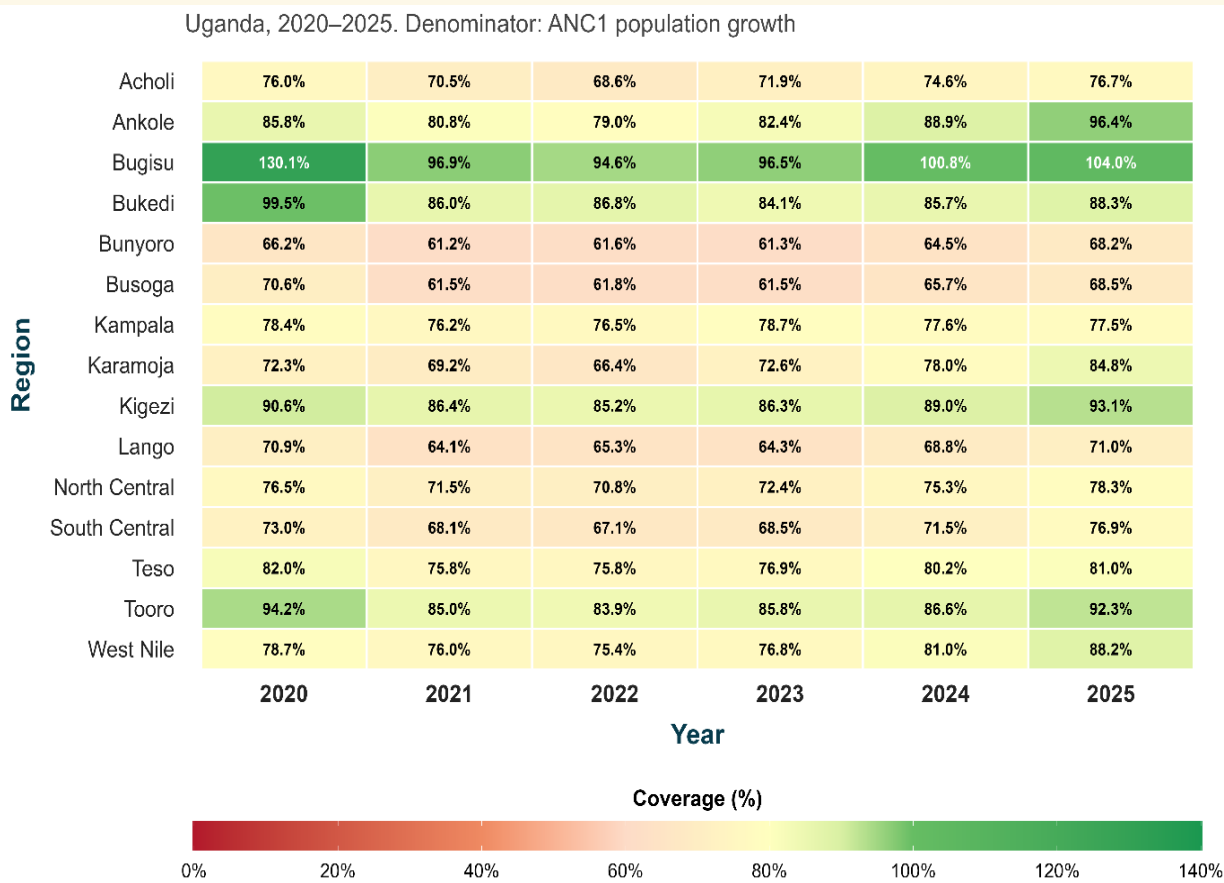
- Adopt a validated denominator approach for routine monitoring, triangulating DHIS2 estimates against survey benchmarks, ANC1/Penta1-adjusted denominators, and population projections.
- Prioritize subnational denominator review in regions with implausible coverage, especially where estimates exceed 100% or differ sharply across denominator methods, to improve planning, target-setting, and resource allocation.

Introduction: This section examines national and subnational trends in RMNCAH service coverage from 2020 to 2025, focusing on institutional delivery and Pentavalent 3 vaccination. Routine facility data are compared with survey and international estimates where available to assess whether reported gains.

National trend in institutional live births coverage



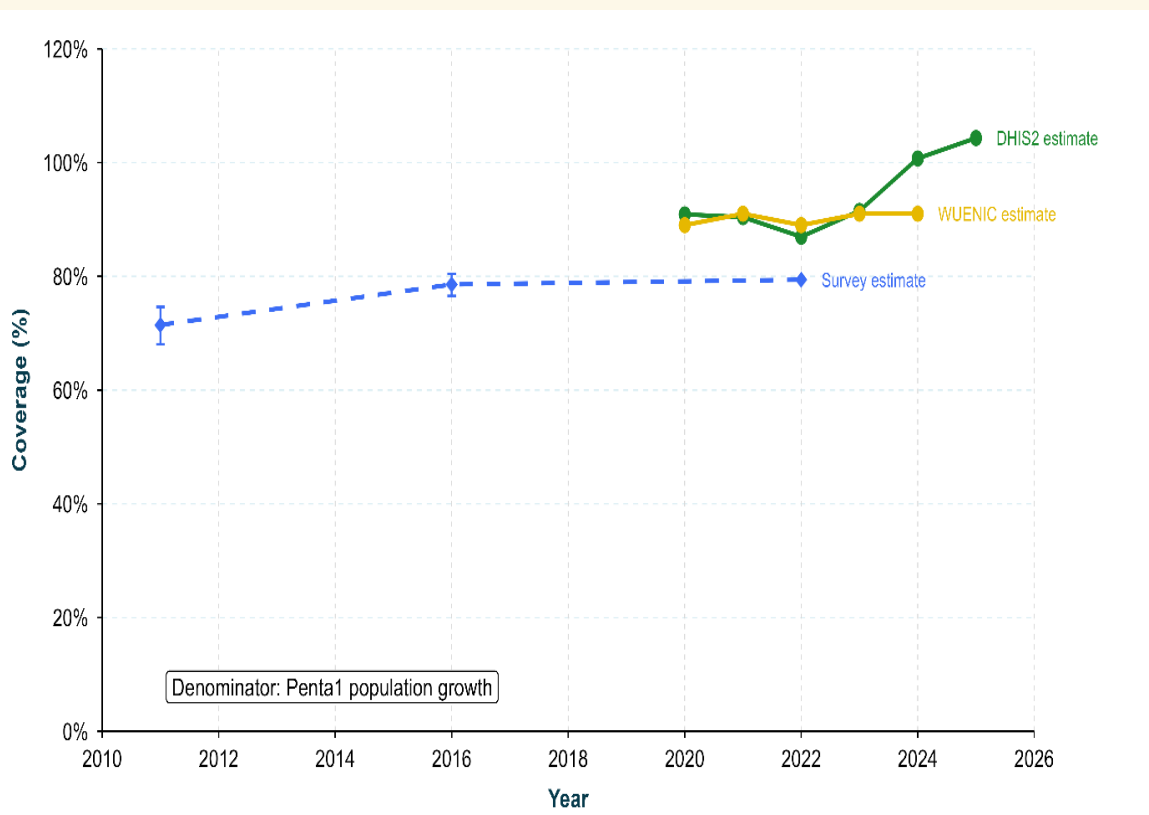
Regional trend in institutional live births coverage



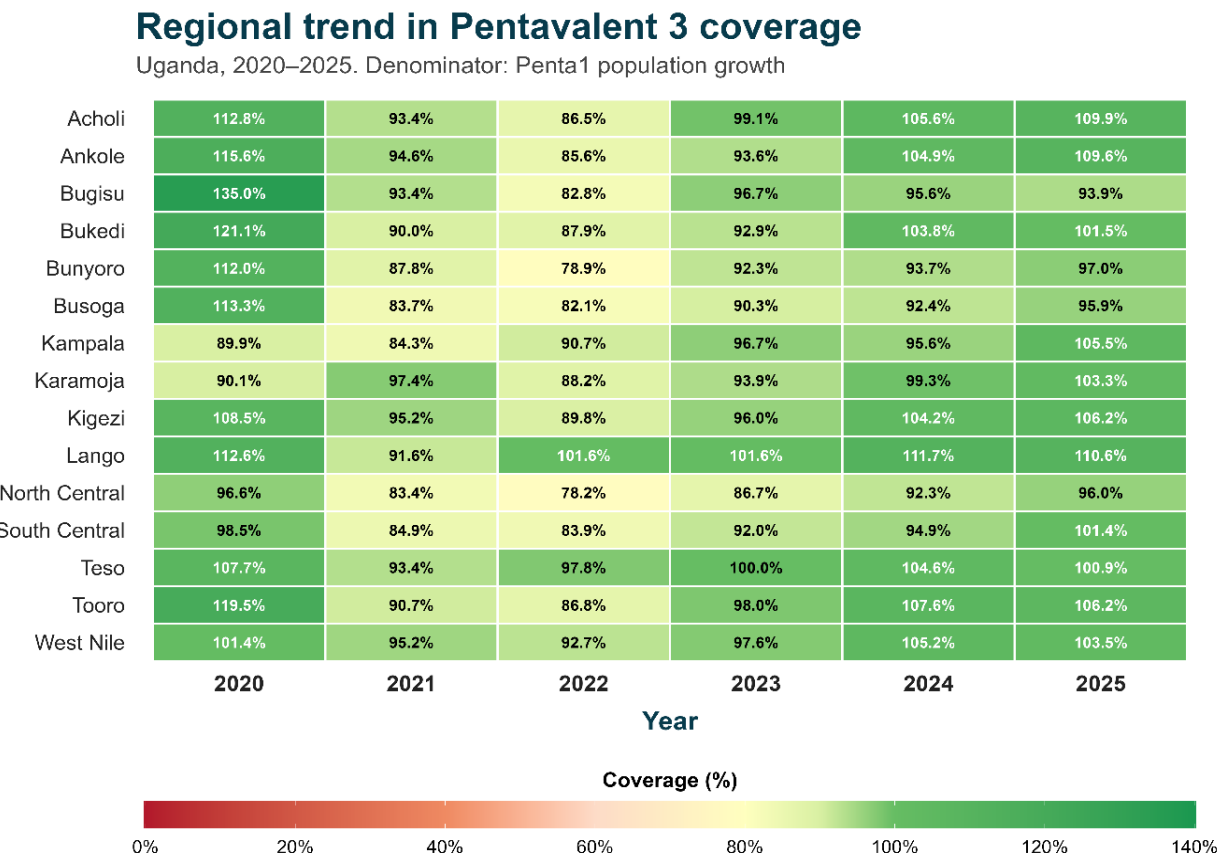
Institutional live births coverage:

- ✓ National institutional live birth coverage increased from 68.0% in 2020 to 84.0% in 2025 closely aligning with community survey estimates and indicating a genuine improvement in access to facility-based childbirth. However, substantial regional disparities remain.
- ✓ While Ankole (96.4%), Bugisu (104.0%), and Tooro (92.3%) surpassed the national 90% benchmark, Bunyoro (68.2%), Busoga (68.5%), and Lango (71.0%) continue to lag behind.

National trend in Pentavalent 3 coverage



Regional trend in Pentavalent 3 coverage



Pentavalent 3 Immunization Coverage:

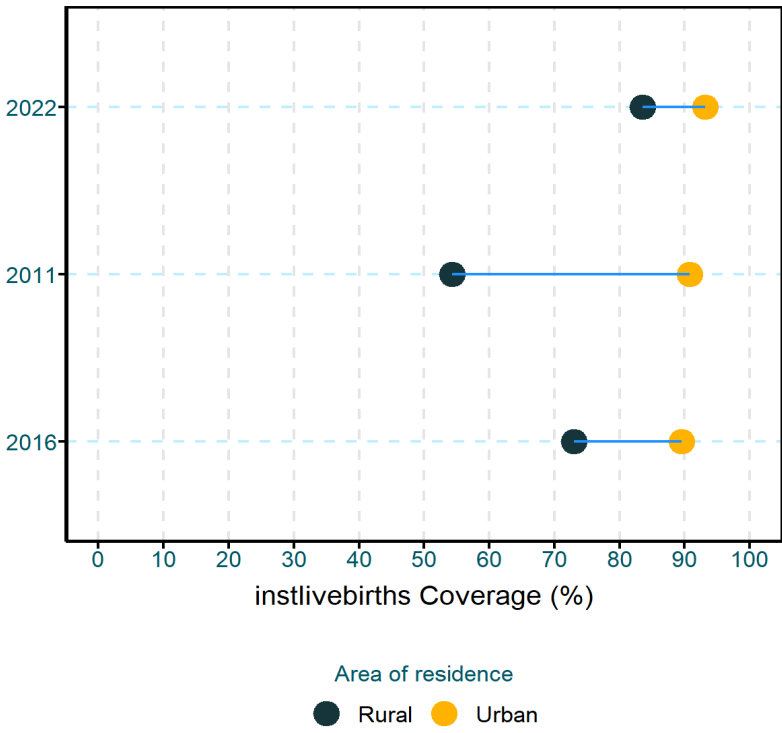
- National DHIS2 administrative data estimated Pentavalent 3 coverage at 104.0% in 2025, with several regions, including Acholi (109.9%), Ankole (109.6%), and Lango (110.6%), reporting implausible coverage above 100%.
- These findings point to denominator mismatch, where facilities vaccinate mobile and cross-border populations that are not reflected in district population estimates.

Recommendations:

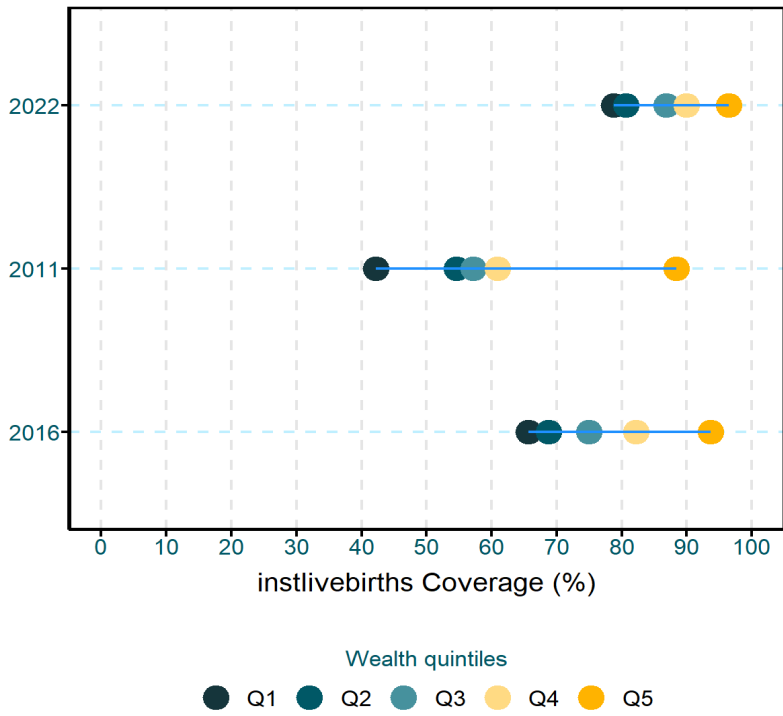
1. To close the gaps, the Ministry of Health should prioritize targeted investments in maternal and child health services, including infrastructure, and demand-generation interventions in the lowest-performing subregions.
2. The Ministry of Health should strengthen denominator estimation and routinely validate administrative coverage against ANC1/Penta1-adjusted populations and WUENIC estimates to improve immunization planning, vaccine allocation, and identification of underserved children.

Introduction: This section examines whether improvements in RMNCAH service coverage are reaching all population groups and geographic areas. Survey-based analyses compare coverage by residence and wealth, while routine facility data are used to assess regional and district-level variation. The findings highlight where inequalities have narrowed, where disparities persist, and which groups or areas may require targeted action

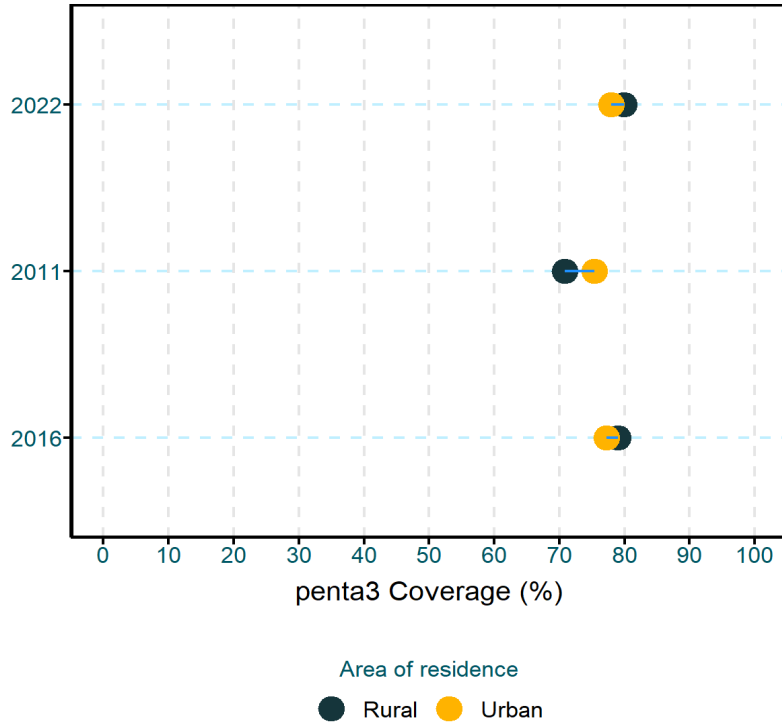
Institutional live births by residence



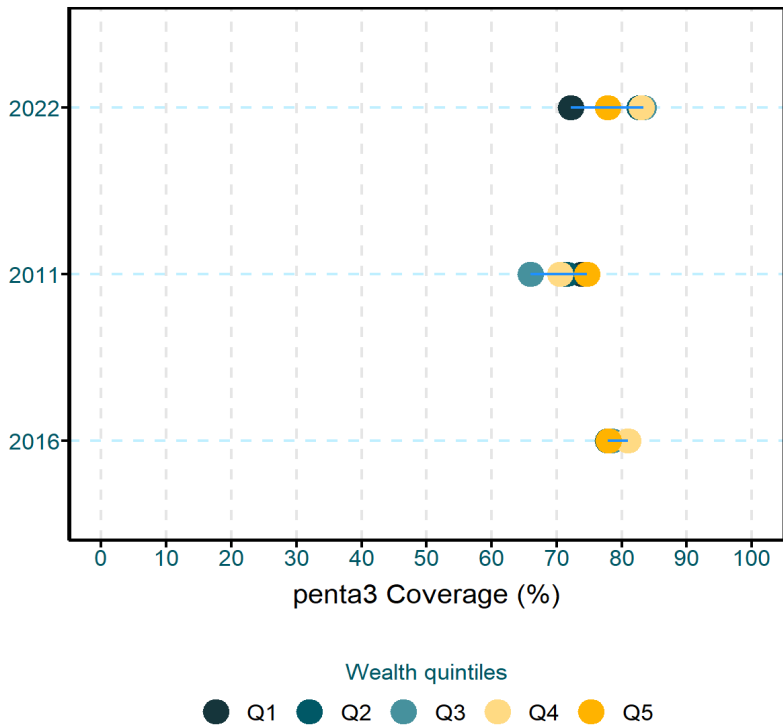
Institutional live births by wealth quintile



Penta3 by residence



Penta3 by wealth quintile

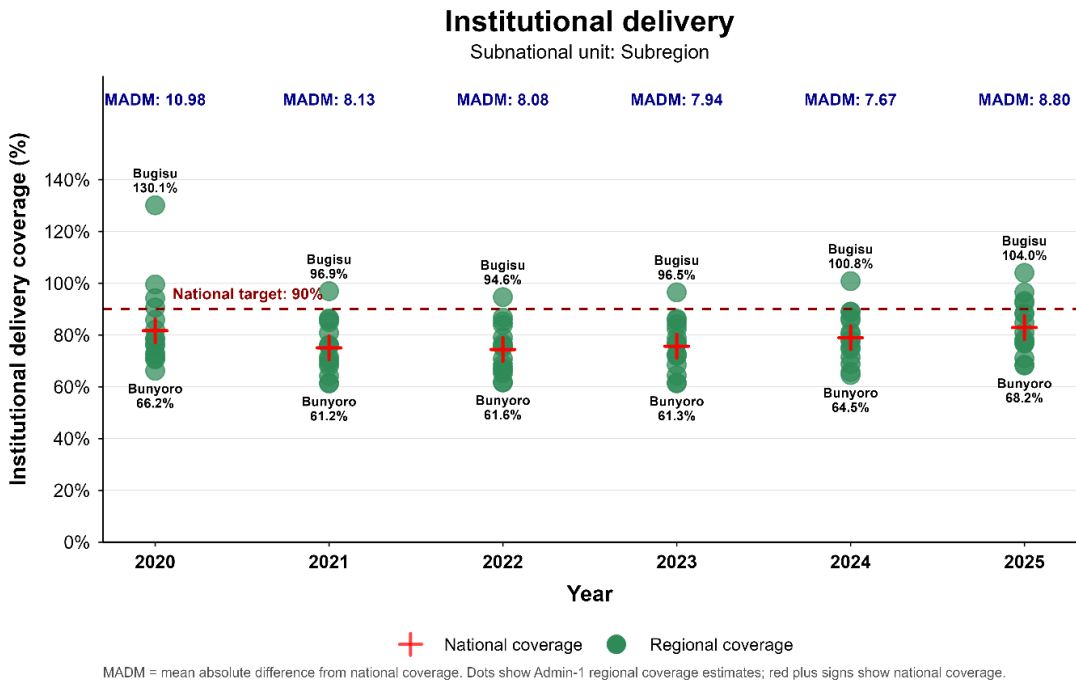


Institutional delivery coverage has increased and inequalities between wealth groups and rural/urban populations have narrowed.

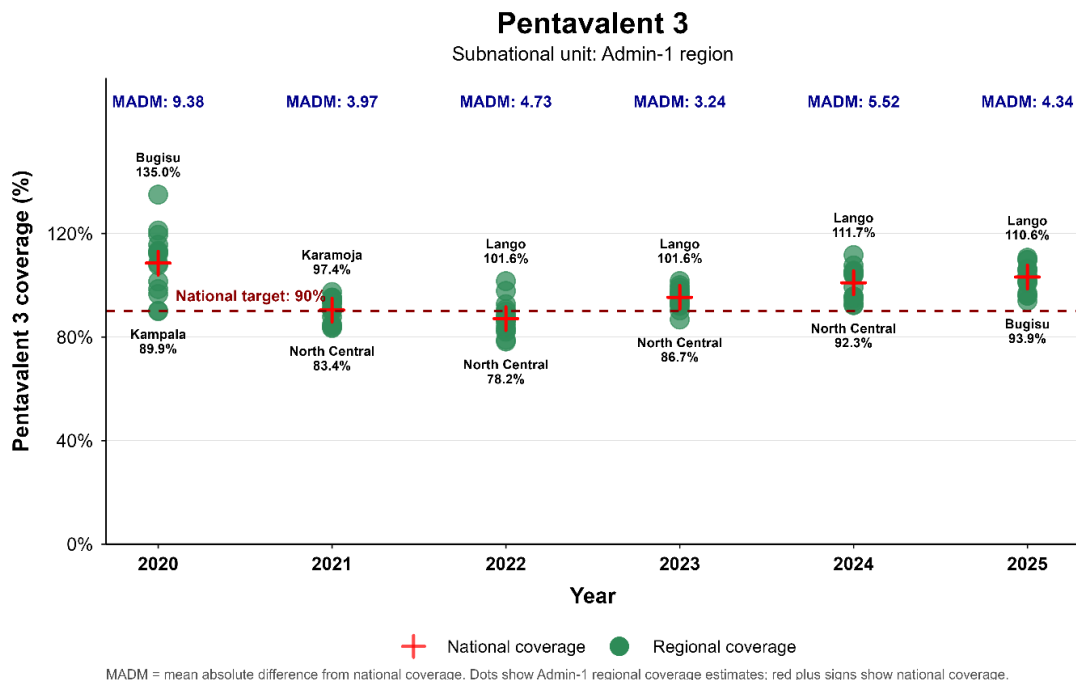
- Inequities in institutional delivery have narrowed, with smaller gaps between wealth groups and between rural and urban populations.
- Penta3 coverage appears more equitable overall, but some geographic inequalities remain across regions and districts.
- The equity gap is more visible for service use at childbirth than for vaccination.

Geographical inequalities: Regions

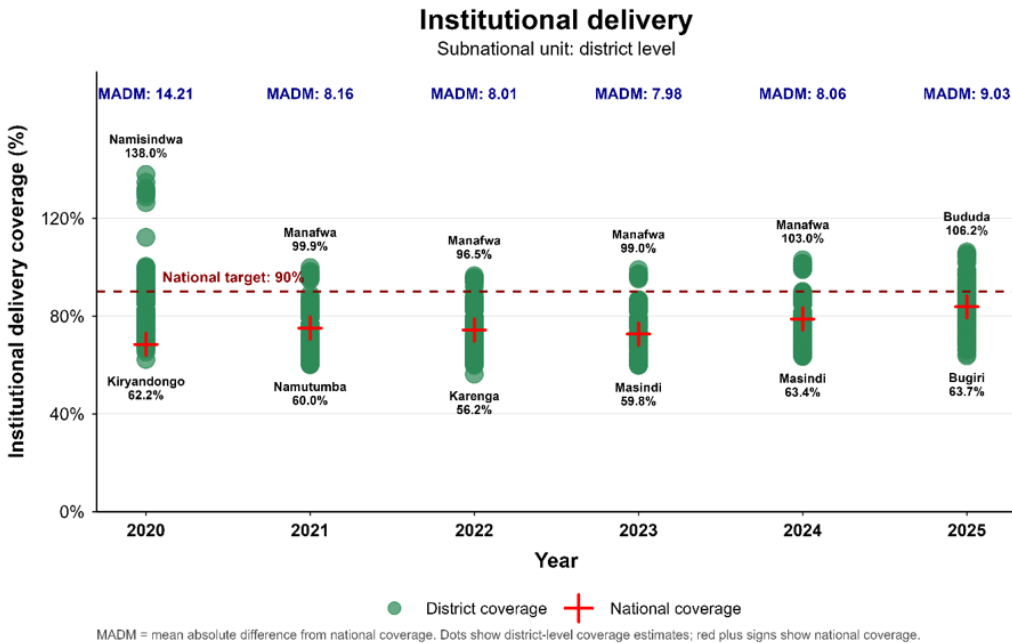
Institutional delivery, Regions



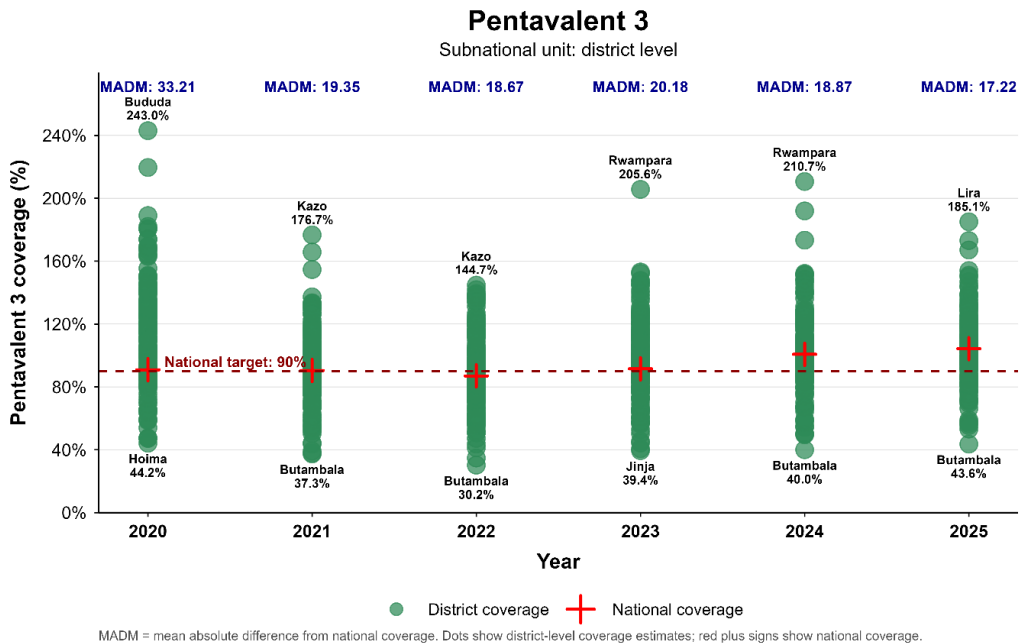
Pentavalent 3, Regions



Institutional delivery, district level



Pentavalent 3, district level

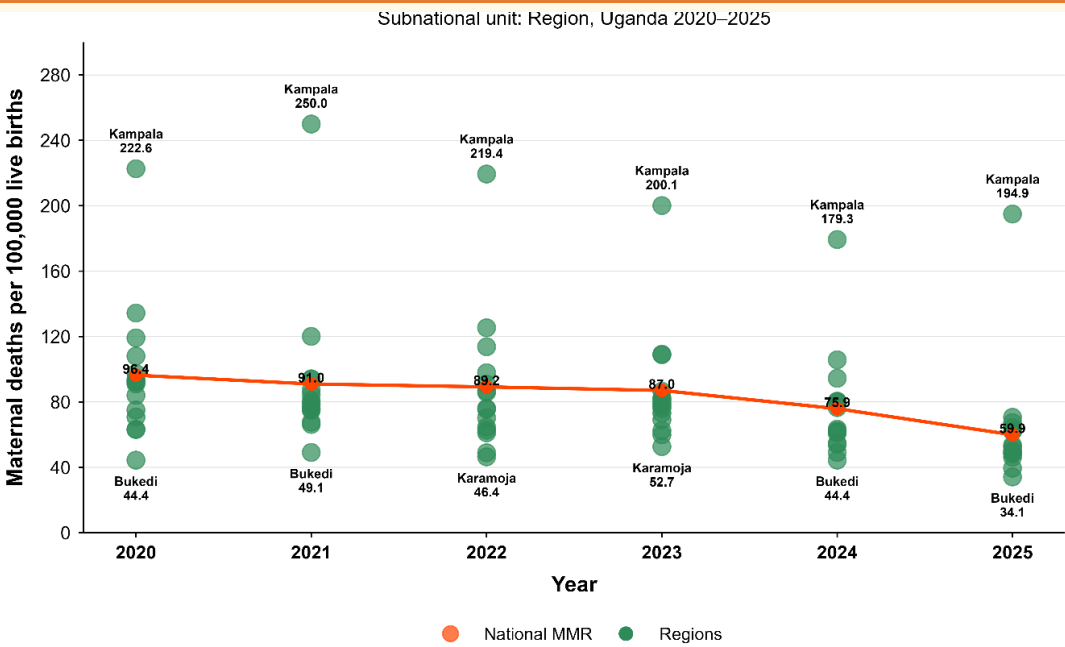


- Large geographic differences persist, with some regions and districts consistently achieving higher coverage than others. Coverage improvements have not been uniform, with a small number of districts lagging behind national progress.
- District-level denominator and numerator review should accompany equity monitoring.

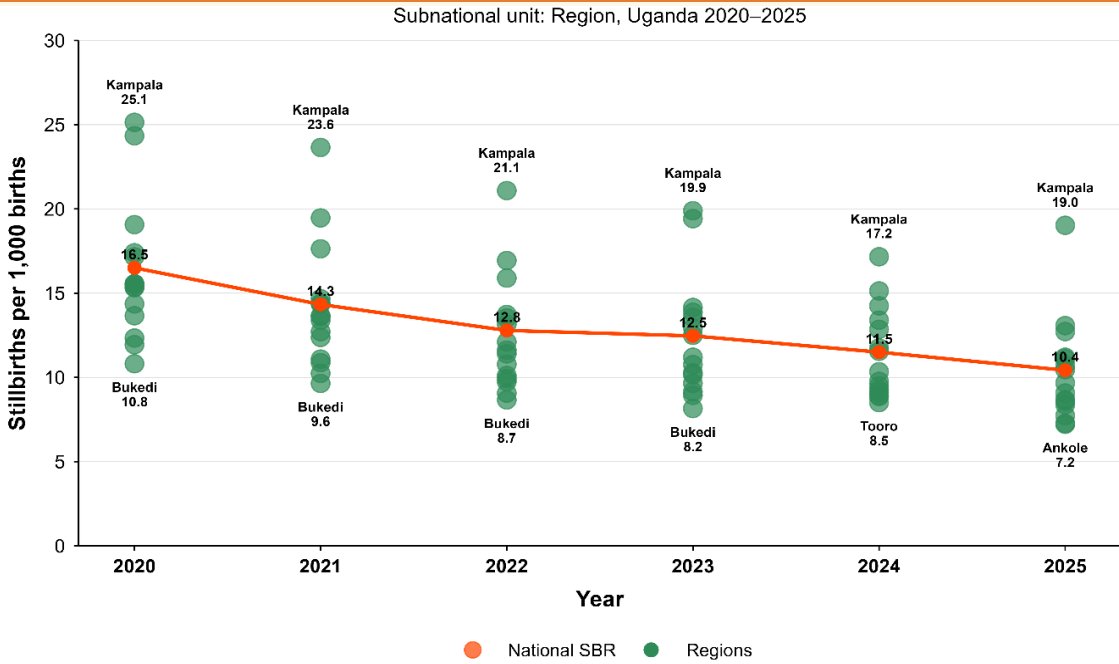
4 Institutional mortality

Introduction: We present trends and regional patterns in facility-based maternal deaths, neonatal deaths, and stillbirths from 2020 to 2025. Findings are interpreted together with reporting completeness and mortality ratios to assess progress and identify possible underreporting..

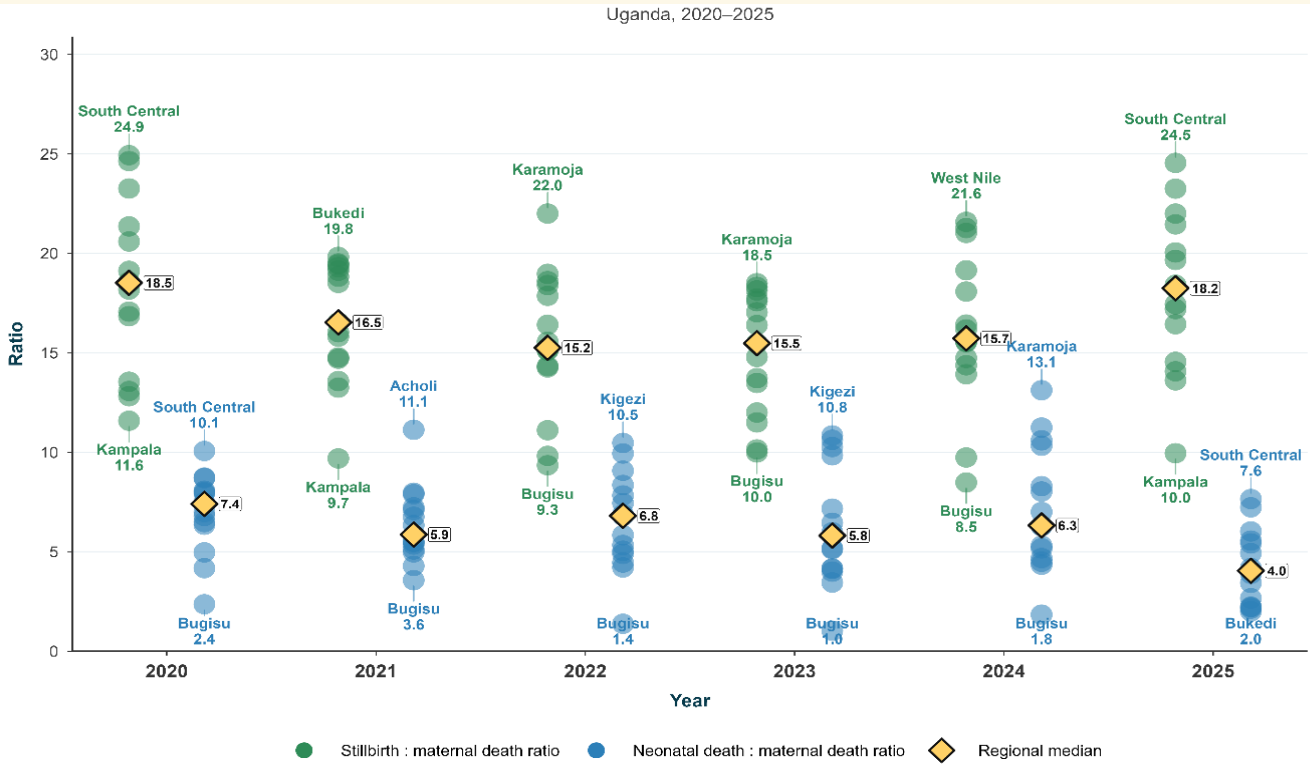
Maternal mortality in health facilities



Stillbirth rate in health facilities



Institutional mortality reporting ratios by region

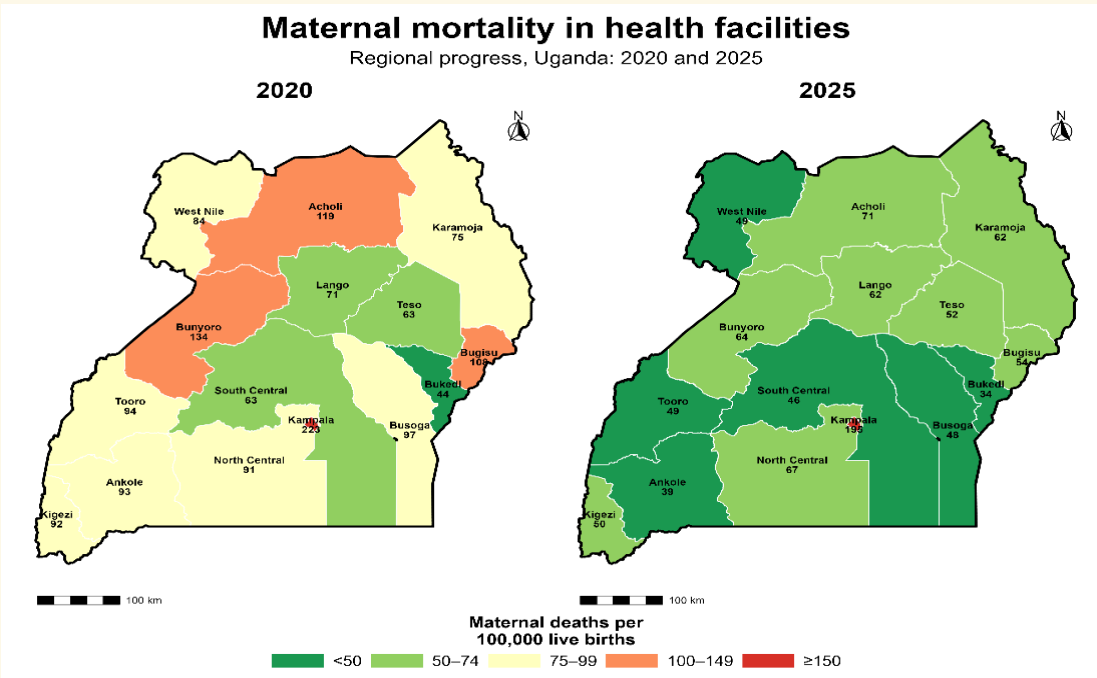


- The IMMR reduced by 38%, from 96.4 per 100,000 live births in 2020 to 59.9 in 2025. The institutional stillbirth rate fell from 16.5 per 1,000 births in 2020 to 10.4 in 2025, a reduction of about 37%, noting that progress has slowed since 2022.
- The stillbirth-to-maternal death ratio remains within the plausible 5-25 range nationally, but regional outliers suggest differential underreporting and should be reviewed.

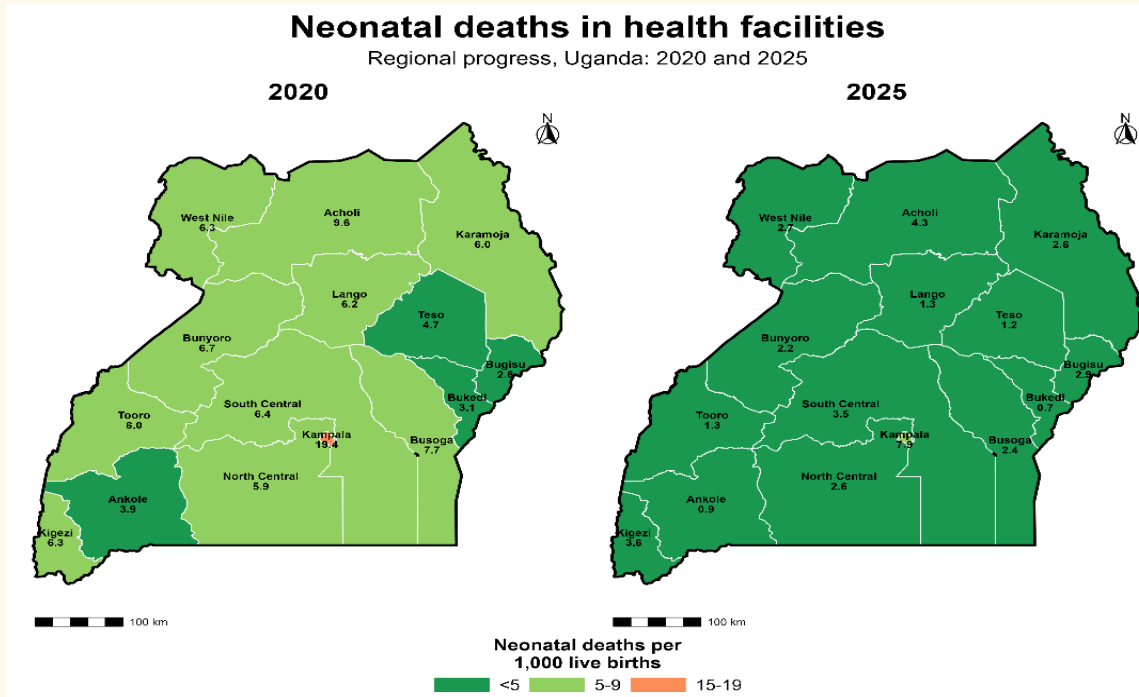
Recommendation

- Uganda’s MPDSR system, established in 2017, has contributed to reductions in maternal mortality by translating death reviews into concrete actions that improve quality of care, strengthen accountability, and prevent avoidable maternal deaths. Continued efforts should focus on strengthening the response, addressing key gaps leading to poor maternal outcomes, with particular emphasis on improving the quality of antenatal, intrapartum and newborn care and ensuring implementation of recommended response actions.

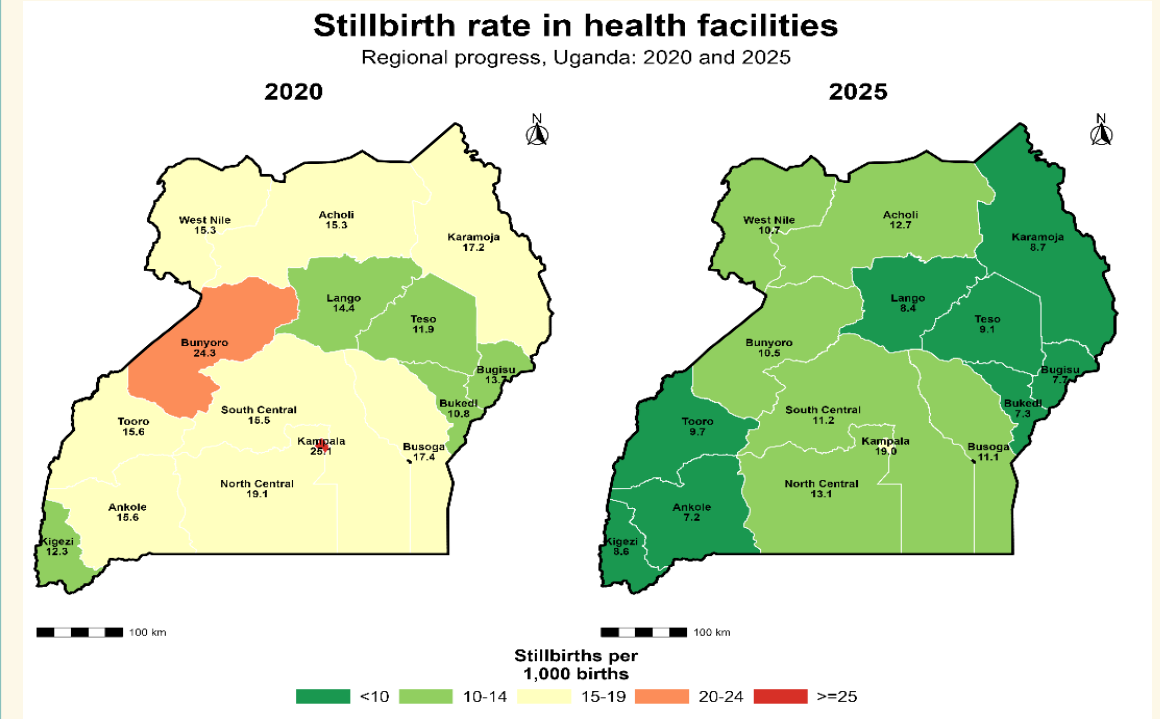
Maternal mortality in health facilities



Neonatal deaths in health facilities



Stillbirth rate in health facilities



Interpretation

- The maps show a visible shift towards lower mortality categories by 2025 for maternal mortality, neonatal deaths and stillbirths.
- Kampala remains a high reporting/high burden area across several mortality measures, likely reflecting both referral concentration and case severity.

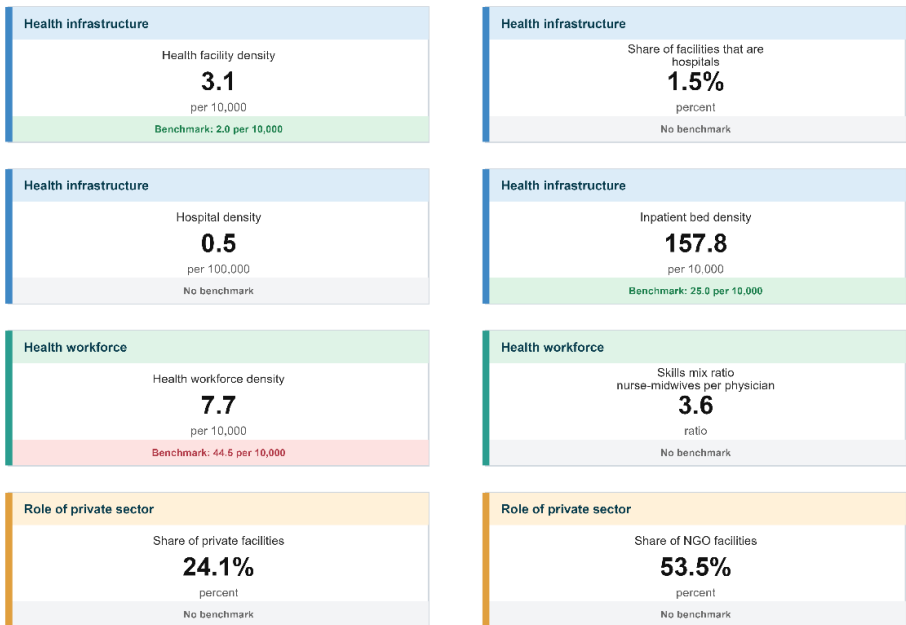
Recommendation

- Low mortality in some regions should be interpreted together with reporting completeness because very low facility mortality may also reflect underreporting.

Introduction: Health system indicators contextualize coverage and mortality patterns by showing whether infrastructure, workforce and ownership patterns support equitable service delivery.

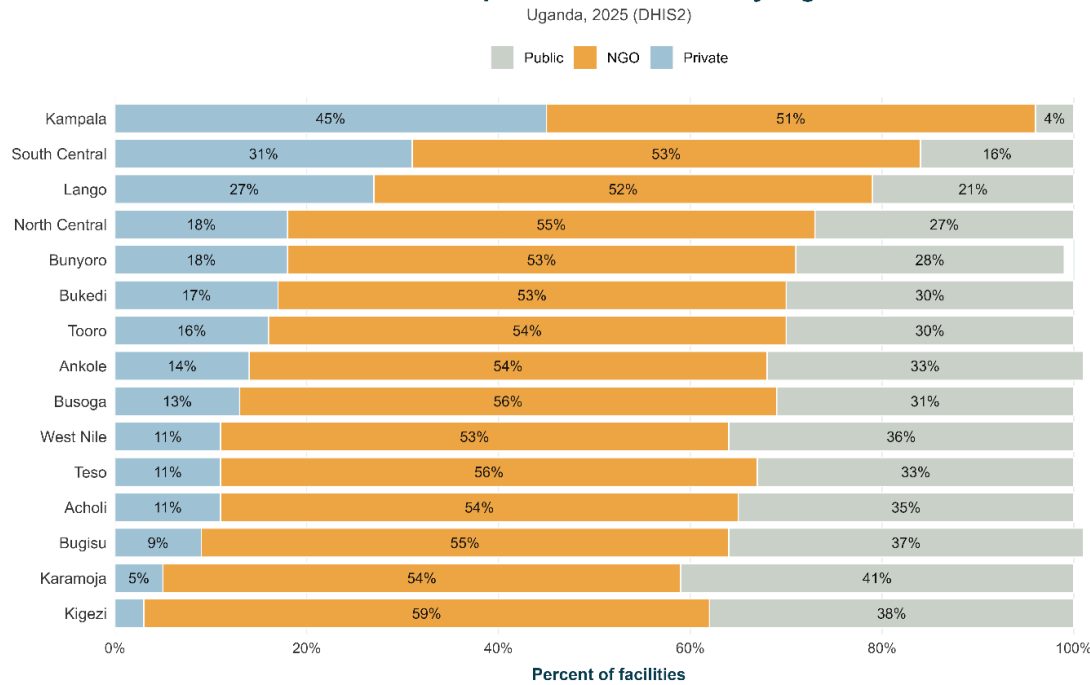
Uganda health system inputs: 2025

Uganda health system inputs: 2025



Ownership of health facilities by region

Ownership of health facilities by region

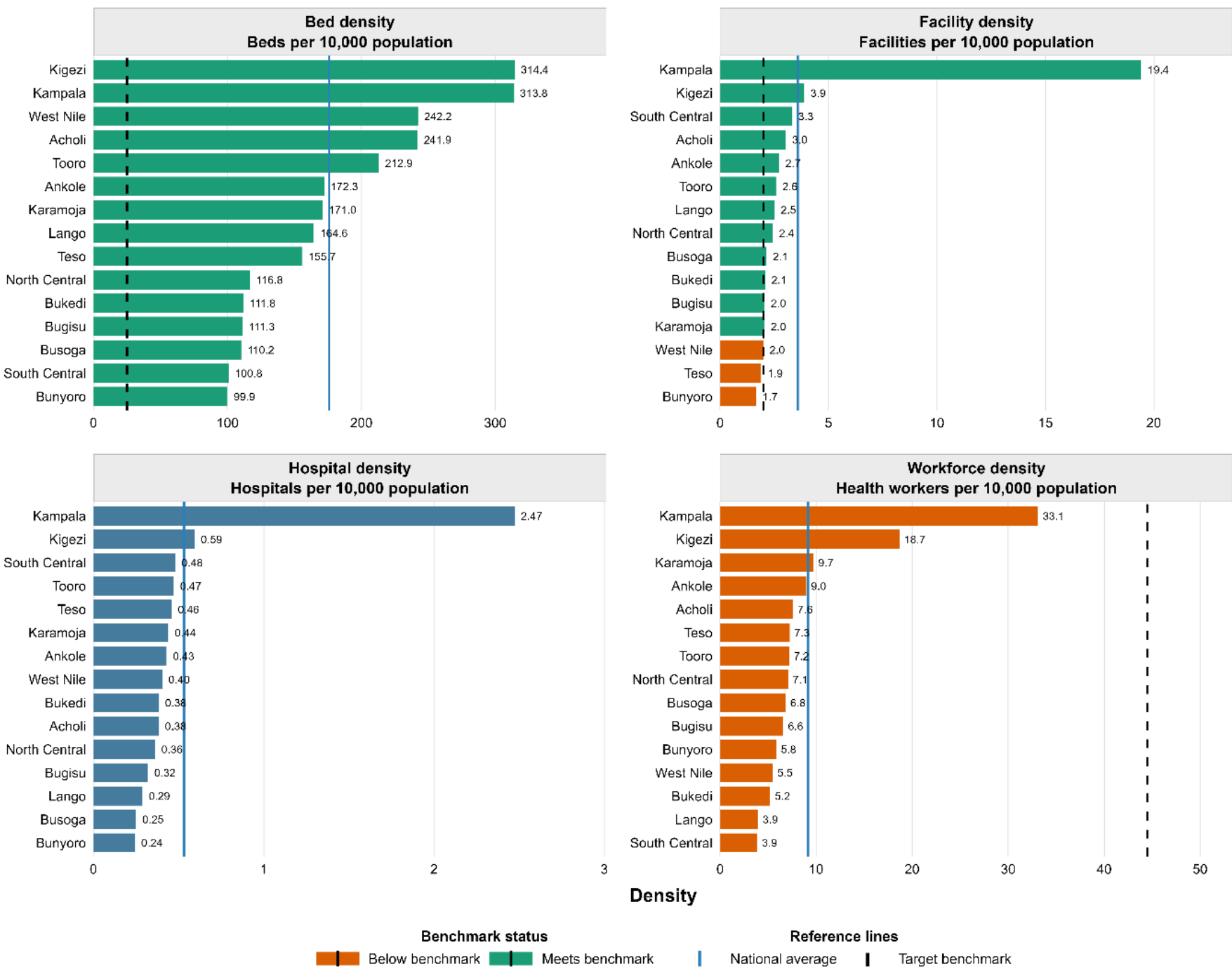


National readiness

- Facility density (3.1 per 10,000) is above the benchmark of 2, and bed density is high relative to the benchmark.
- Health workforce density is critically low (7.7 per 10,000), falling far short of the WHO target (23), highlighting a severe shortage of skilled health professionals.
- NGO and private ownership represent a large share of facilities, especially in Kampala and several central regions.

Regional density of health system resources

Uganda, 2025



Regional readiness

- Resource density is uneven: Kampala is an outlier for facility, hospital and workforce density.
- Regions below benchmark on facility and workforce density require targeted investments and redistribution strategies.

Recommendations

- The key constraint is the shortage and unequal distribution of skilled health workers. Targeted workforce **investments in low-density regions should be accompanied by a review of infrastructure data and service capacity** to address persistent overcrowding and improve access to quality care.

Overall message

- ✓ Uganda has achieved substantial gains in RMNCAH outcomes since 2020, particularly reductions in maternal mortality, stillbirths, and neonatal mortality, demonstrating that investments in service delivery and quality improvement are yielding results.
- ✓ Despite national progress, significant subnational disparities persist, with some regions and districts continuing to lag behind in service coverage and health outcomes.
- ✓ The next phase of improvement will depend on strengthening data quality and resolving denominator inconsistencies to ensure reliable performance measurement and targeting of resources.
- ✓ Uganda’s MPDSR system has been a key contributor to mortality reduction and should continue to drive action on maternal, stillbirth, and newborn outcomes through stronger implementation of response actions.
- ✓ The most critical health system constraint according to the analysis in this report is the shortage and unequal distribution of skilled health workers, requiring targeted workforce investments in underserved areas.
- ✓ Going forward, the priority is to sustain national gains while focusing resources, workforce, and quality improvement efforts on districts and populations that are being left behind.