SOMALIA

Federal Republic of Somalia
Ministry of Health & Human Services

GLOBAL FINANCING FACILITY

African Population and Health Research Center

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

Analysis of reproductive, maternal, newborn, child and adolescent health indicators

2019-2023

chartbook with main results and interpretations

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General Introduction

This Chartbook summarizes the results for key indicators of reproductive, maternal, newborn, child and adolescent health (RMNCAH) that were produced by the country team at a Countdown analysis workshop in Kigali, April 22-26, 2024. The analysis is based on routine district health facility data for 2019-2023, recent national surveys, health system data and global estimates, much attention is paid to data quality.

This Chartbook describes and interprets the results, which should be a critical input for the monitoring of country RMNCAH and health sector plans .

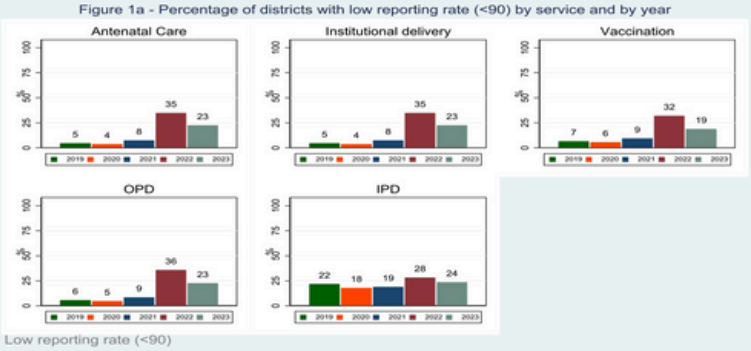
For each of the sections there are selected graphs and tables on key indicators with interpretations made by the country team during the workshop.

1 Facility data quality assessment: numerators 1

Table 1: Summary of reported health facility data quality, DHIS2, 2022-2023

	Data quality metrics	2019	2020	2021	2022	2023
1	Completeness of monthly facility reporting (mean of ANC, delivery, immunization, OPD)					
1a	% of expected monthly facility reports (national)	100	100	97	87	92
1b	% of districts with completeness of facility reporting >= 90%	91	93	90	67	78
1c	% of districts with no missing values for the 4 forms	29.38	29.54	29.63	52.91	57.43
2	Extreme outliers (mean of ANC, delivery, immunization, OPD)					
2a	% of monthly values that are not extreme outliers (national)	99.39	99.41	99.48	98.07	94.12
2b	% of districts with no extreme outliers in the year	96.56	96.7	96.16	87.37	80.56
3	Consistency of annual reporting					
3a	ANC1 to penta1 ratio in the reported data (national)	2.037	1.769	1.69	1.216	1.373
3b	Penta1 to penta3 ratio in the reported data (national)	1.262	1.374	1.253	1.172	1.176
3c	% of districts with ANC1-penta1 ratio in expected range	16	9.4	12.3	22.6	28.3
3d	% of districts with penta1-penta3 ratio in expected range	46.2	44.3	43.4	76.4	74.5
4	Annual data quality score (mean 1a, 1b, 2a,2b, 3c,3d)	74.858	73.802	73.057	73.073	74.58

Figure 1a - Percentage of districts with low reporting rate (<90) by service and by year



Overall, throughout the reporting period, the annual data quality scores were close to 75%.

National completeness

From 2019 to 2023, the data indicates fluctuations in the percentage of expected monthly facility reports. In 2019 and 2020, the metric remained at 100%, indicating that all anticipated reports were received as expected during these years, suggesting a high level of compliance or data completeness within the reporting system. However, in 2021, there was a slight decrease to 97%, indicating a small deviation from the expected level of reporting, which could potentially indicate issues such as reporting delays, incomplete submissions, or data collection challenges. The most significant deviation occurred in 2022 when the percentage dropped to 87%.

Reporting completeness by districts

From 2019 to 2021, the reporting period, the data shows relatively high levels of completeness, with at least 90% of districts meeting or surpassing the 90% reporting threshold. This suggests a strong adherence to reporting requirements within most districts during these years, indicating robust data submission processes. However, in 2022, there was a drop, when completeness of facility reporting was 67% of districts meeting the 90% threshold.

Missingness

Between 2019 and 2021, close to 30% of districts met the completeness criteria. While this uptick suggests some improvement, the percentage remains relatively low compared to the total number of districts assessed, indicating persistent challenges in achieving comprehensive data completeness.

1 Facility data quality assessment: numerators 2

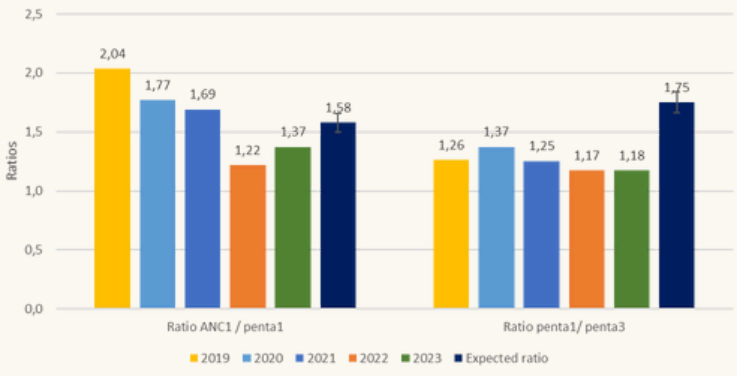
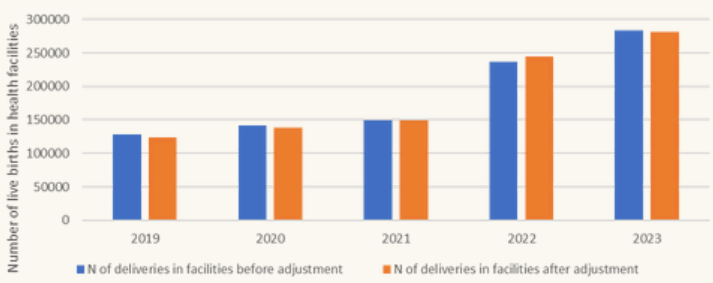


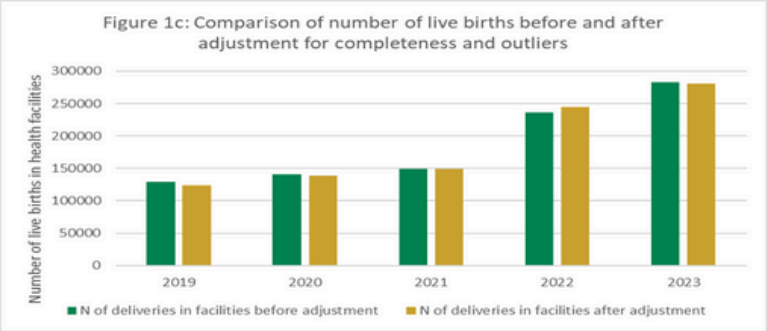
Figure 1c: Comparison of numbers of ANC1 and penta1 reported by health facility, by year

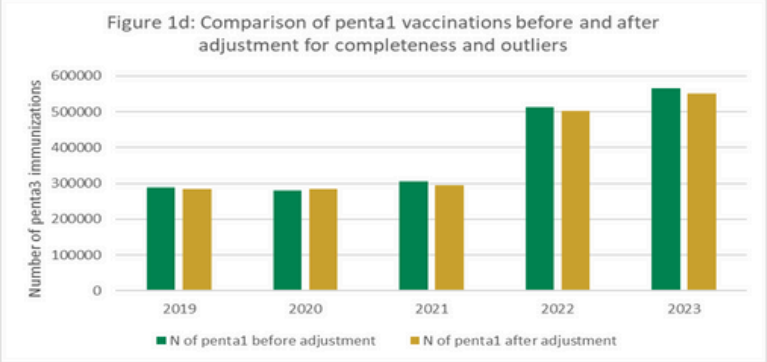
Figure 1c: Comparison of number of live births before and after adjustment for completeness and outliers



- **ANC-1 to Penta 1 ratio**
- Between 2019 and 2021, the ratio ANC1 to Penta 1 ratio was above the expected value but later reduced and remained below the accepted threshold in 2022 and 2023
- **penta1 to penta3**
- Consistency between penta1 and penta3 is fairly good. We suspect there were delays in coming back for the 3rd shot.
- **District with the acceptable ratios**
- For the two reporting period, the percentage of district with the acceptable ANC/Penta 1 ratio was less than 40% and as of 2023, 30% of the district had were within the acceptable range.
- Further, for the two reporting period, the percentage of district with the acceptable Penta1/pent2 ration was close to 75% (72% and 76% in 2022 and 2023, respectively).

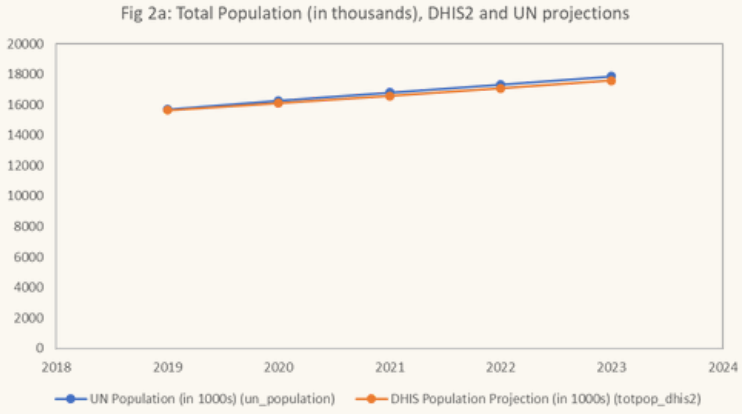
Health facility data adjustment: numerators





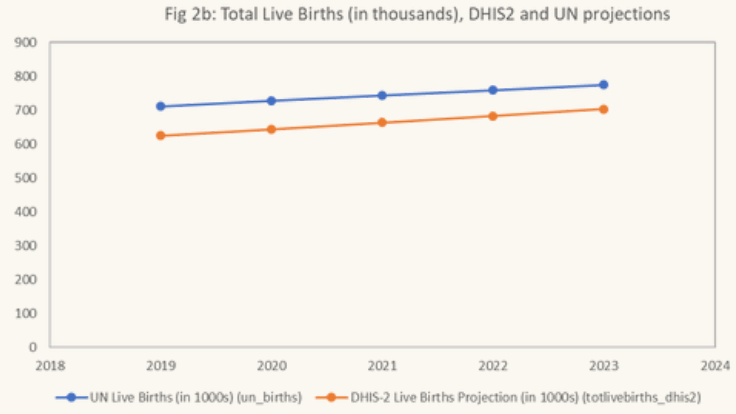
- The difference between the adjusted and unadjusted was 2056 live births, which was a 1% .
  - The impact of the adjustment was small, suggesting inconsistency in reporting of live births.
- The difference between the adjusted and unadjusted was 15710 for penta1, which was 3%.
  - The impact of the adjustment is small and it suggests consistency in penta1 reported numbers.

2 A- Health facility data denominator assessment



Interpretations

- The DHIS2 total population projection is consistent over time with regular population growth
- The DHIS2 total live birth projection consistent over time (regular trend) 3) the projected numbers of total population and live births are fairly close to the UN population projection



2 B- Health facility data denominator selection

Fig 2c: Institutional birth coverage, DHIS2-based with different denominators, and survey coverage

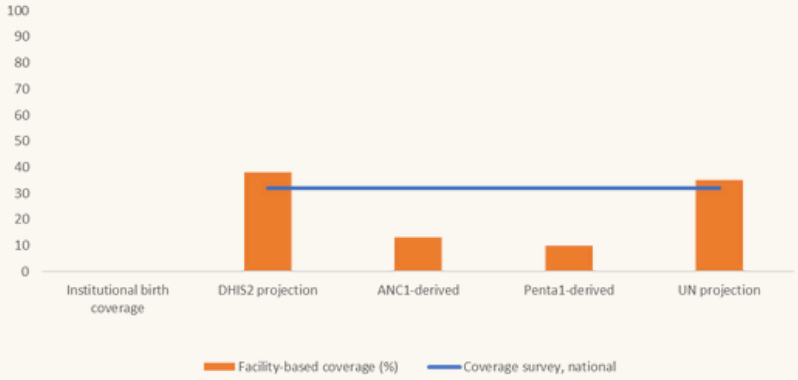
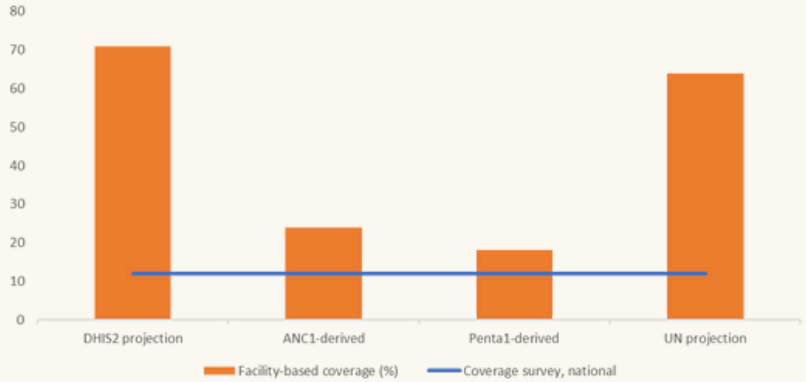


Fig 2d: Penta3 coverage, DHIS2-based with different denominators, and survey coverage

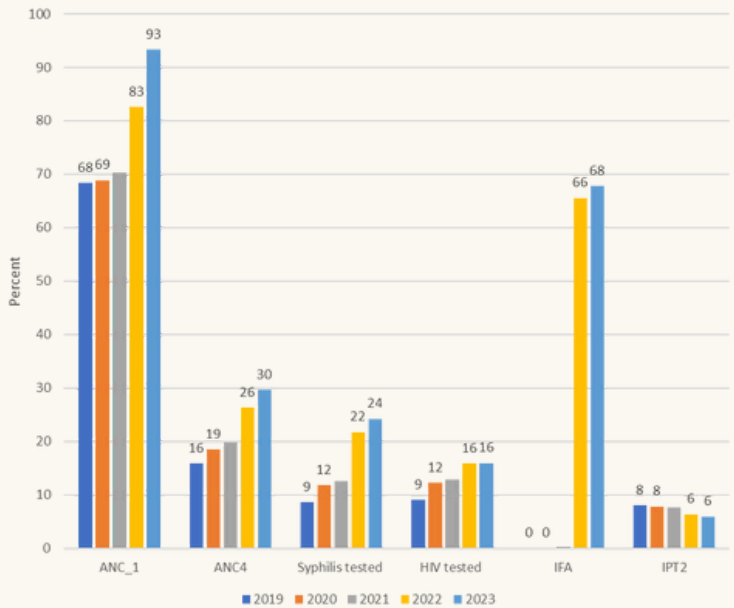


- Institutional delivery (Figure 2c): estimates based on the DHIS2 projection system and UN projection sources were close to the national survey in 2020
- Institutional delivery estimates based on the penta-1 and ANC-1 were far from the survey estimates
- This means that the DHIS population projections is the best denominator for the estimation of institutional delivery and other related MNH indicators
- For penta3 coverage, the penta1-derived denominator performed best as it had the closest value to the survey estimate
- Note that the DHIS-2 population projections are from the Somalia Statistics Office.

3 National coverage and equity: ANC, MNH, immunization, family planning

A- National coverage trends: antenatal care

Figures 3a: Coverage trends in selected antenatal Care indicators



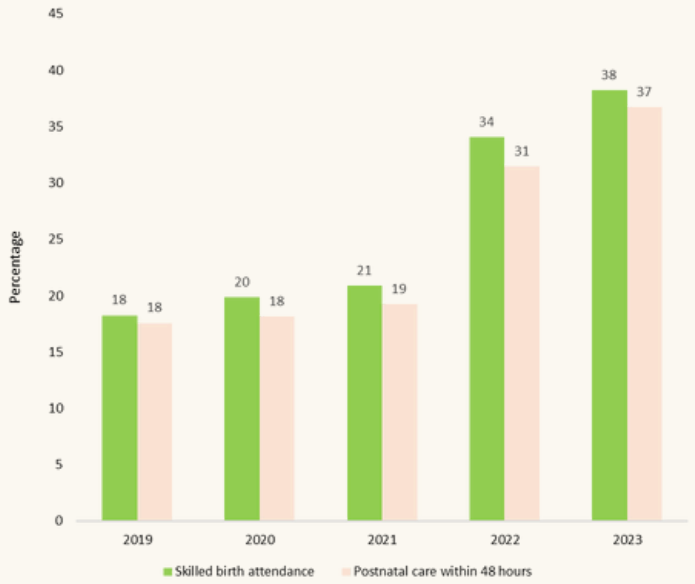
BACKGROUND: Monitoring the coverage of interventions is a critical and direct output of health systems. It is most useful if the national plan has meaningful targets. Both health facility and survey data need to be used.

Interpretations

- We observe consistent trends in ANC-1 attendance, ANC 4 times attendance, HIV testing, syphilis testing and IFA.
- ANC-1 increased from 68% in 2019 to 93% in 2023. However, the estimates are much higher than the 2021 Somalia Health and Demographic survey (31%)
- ANC-4 times attendance increased form 16% in 2019 to 30% in 2023. The estimates are slightly higher than the 2021 Somalia Health and Demographic survey (8%)

B- National coverage trends: delivery care

Figures 3c: Coverage trends institutional delivery and postnatal care



- While there is an increasing trend in skilled birth attendance and postnatal care within 48 hours, as of 2023, these estimates are still low.
- This suggests that while progress is being made, there are still significant gaps in access to and utilization of essential maternal and newborn healthcare services.
- Low estimates for skilled birth attendance and postnatal care within 48 hours highlight ongoing challenges in ensuring universal access to quality maternal and newborn health services.

C- Subnational coverage

Fig 4b: 2023 Institutional delivery by state

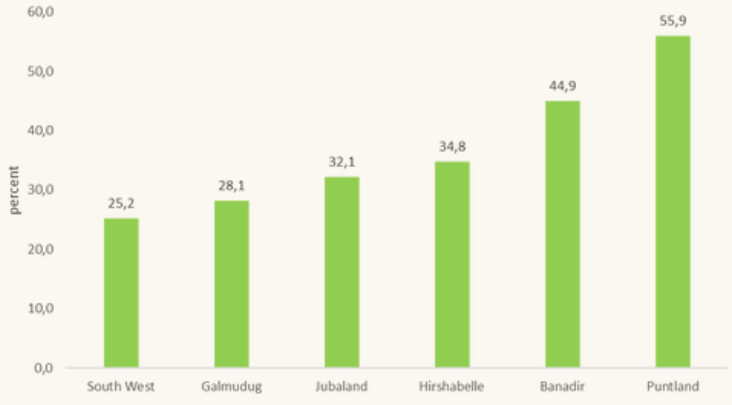


Fig 4c: 2023 Penta 3 distribution by state

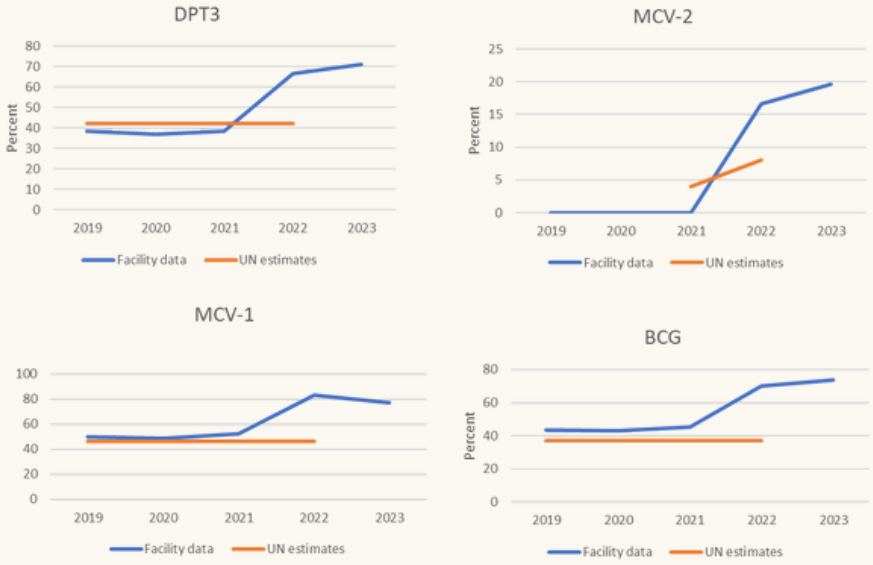
BACKGROUND: Monitoring the coverage of interventions is a critical and direct output of health systems. It is most useful if the national plan has meaningful targets. Both health facility and survey data need to be used.

Interpretations

- Inequalities in Penta 3 and Institutional deliveries between states
- South-west has the least coverage in institutional deliveries (25%). The best preforming states are Banadir (45%) and Puntland (55%).
- Galmuldug has the least coverage in institutional deliveries (33%). The best preforming states are Banadir (85%) and Puntland (97%).

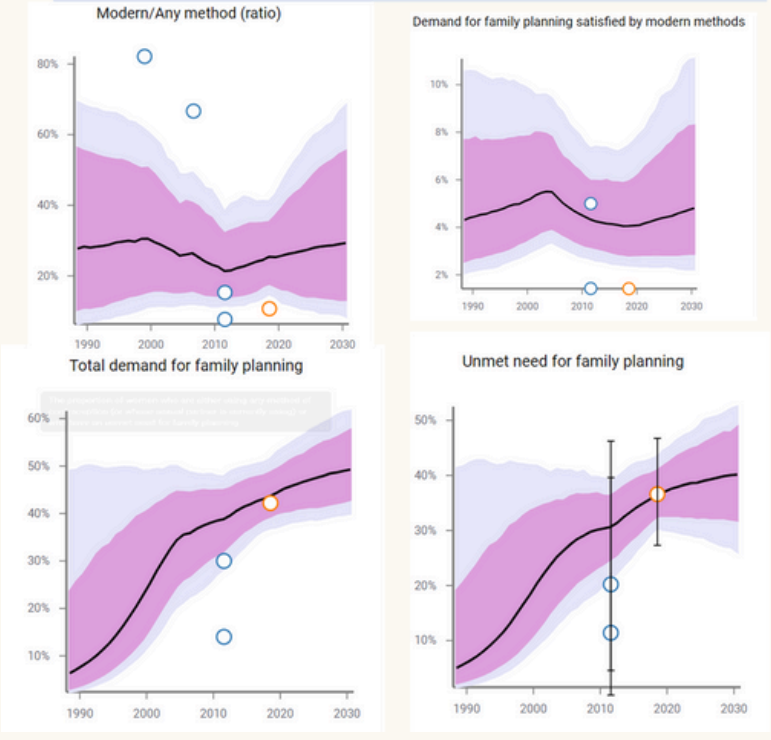
D- National coverage trends: immunization

Figures 3g and 3h: Coverage trends in selected child immunization indicators



- The observation of stagnation in BCG, MCV, and DPT3 coverage between 2019 and 2021, followed by a sharp increase in 2022, highlights fluctuations in immunization coverage rates over the specified period.
- Them consistency between facility-based estimates and UN estimates from 2019 to 2021 suggests a level of alignment in the reported coverage rates. However, the divergence observed in 2022, with facility data indicating a significant increase while UN estimates remain constant, raises questions about the accuracy and reliability of the data sources.
- In such cases, facility-based estimates may be more plausible, as they are directly derived from on-the-ground data collection within healthcare facilities.

E- National coverage trends: family planning



BACKGROUND: Monitoring the coverage of interventions is a critical and direct output of health systems. It is most useful if the national plan has meaningful targets. Both health facility and survey data need to be used.

Interpretations

- The 2030 projected demand for family planning is estimated at 45%
- The 2030 projected Demand for family planning satisfied by modern methods remains below 10%

4 Maternal mortality and stillbirth rate in health facilities

Maternal mortality in health facilities

Figure 5a: Maternal mortality per 100,000 live births in health facilities

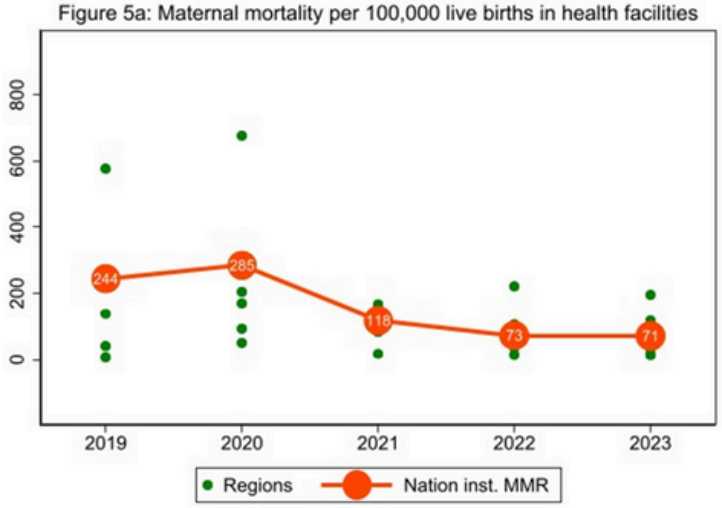
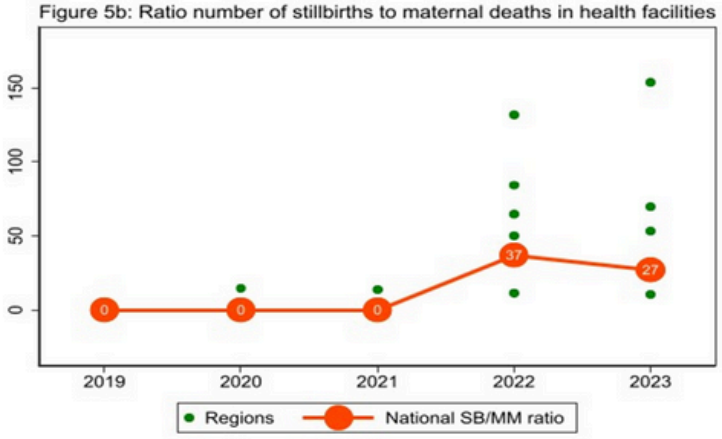


Figure 5b: Ratio number of stillbirths to maternal deaths in health facilities



BACKGROUND: The main challenge with mortality data from health facilities is underreporting of deaths. Deaths may not be recorded in the maternity register, or not reported. Also, maternal deaths in other hospital wards are more likely to be missed, e.g., deaths associated with abortion or sepsis. The main aim is to estimate the level of underreporting in DHIS2 or MPDSR.

INTERPRETATION

- Is the level of MMR from the facility data as expected? What can be said about the regional variation? Are there regions with low MMR and is this plausible?
- What can be said about the regional variation? What percent of regions has very low MMR (< 25) and very low SBR (<6)? Is this plausible or is underreporting of deaths likely?
- What is the ratio stillbirth to maternal deaths? Is it in the range of 5-15? How can this be interpreted? Is this suggestive of underreporting of maternal deaths relative to stillbirths?

Stillbirth rates in health facilities

BACKGROUND: The main challenge with health facility data on stillbirths and neonatal deaths is underreporting. We can estimate the level of underreporting of stillbirths based on different assumptions. For neonatal deaths, DHIS2 reporting systems based on labour and delivery ward are limited to neonatal deaths before discharge in the reporting system. Therefore, they are only an indicator of mortality during the first 24-48 hours.

Figure 5c: Stillbirths per 1,000 births in health facilities

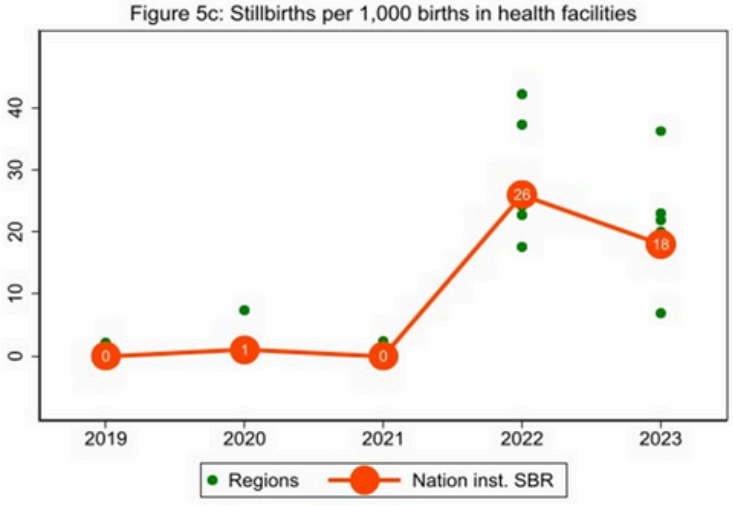
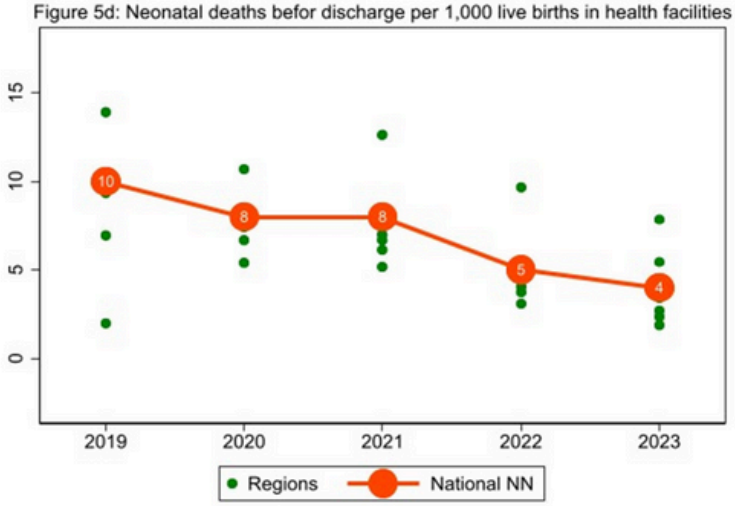


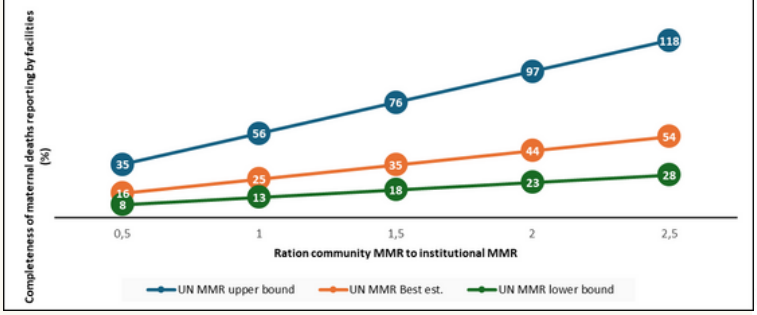
Figure 5d: Neonatal deaths befor discharge per 1,000 live births in health facilities



- Is the level of stillbirths from the facility data as expected? What can be said about the regional variation? Are there regions with low stillbirth rates, and is this plausible?
- What can be said about the estimated level of completeness of reporting of stillbirths? Which assumptions are most plausible, in terms of population level of SBR (e.g., median, lower or upper bound from UN estimates) and the ratio community to institutional mortality?
- What is the neonatal mortality (before discharge) nationally? How do these compare with the national estimate of neonatal mortality per 1,000 live births? What can be said about reporting completeness, are the health facility rates plausible?

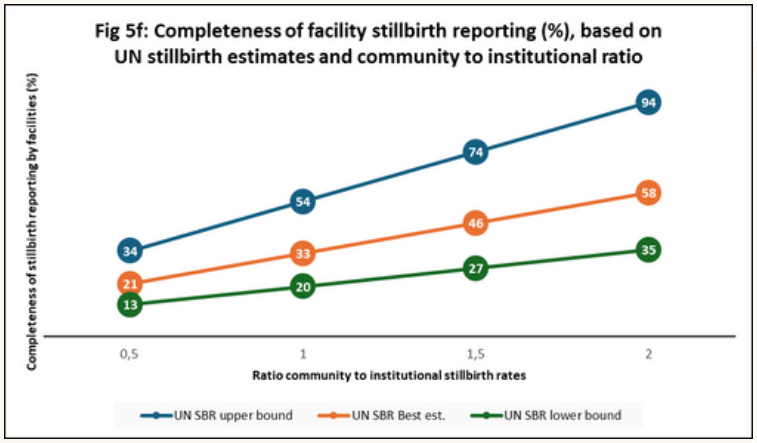
Underreporting of maternal deaths and stillbirths

Fig 5e: Completeness of facility maternal death reporting (%), based on UN MMR estimates and community institutional ratio



BACKGROUND: The main challenge with health facility data on stillbirths and neonatal deaths is underreporting. We can estimate the level of underreporting of stillbirths based on different assumptions: 1) using population mortality estimates from the UN: lower bound, best estimate and upper bound 2) community to institutional mortality ratio: assumptions ranging from half as low to at least 2 times higher community mortality.

Fig 5f: Completeness of facility stillbirth reporting (%), based on UN stillbirth estimates and community to institutional ratio



- Is the level of stillbirths from the facility data as expected? What can be said about the regional variation? Are there regions with low stillbirth rates, and is this plausible?
- What can be said about the estimated level of completeness of reporting of stillbirths? Which assumptions are most plausible, in terms of population level of SBR (e.g., median, lower or upper bound from UN estimates) and the ratio community to institutional mortality?
- What is the neonatal mortality (before discharge) nationally? How do these compare with the national estimate of neonatal mortality per 1,000 live births? What can be said about reporting completeness, are the health facility rates plausible?

5 Health services utilization: OPD and admissions under-5

Table 6a: OPD service use by children and all ages, national, 2023

Admin-1 unit	Mean # of OPD visits per 100 inhabitants, all ages,2023	Mean # of OPD visits per 100 child under-5, 2023	Mean # of IPD admissions per 100 inhabitants (all ages), 2023	Mean # of IPD admissions per 100 children under-5, 2023	Percent of OPD visits per 100 children under-5, 2023
Banadir	44	113	12		46
Galmudug	34	77	2		40
Hirshabelle	59	155	9		47
Jubaland	58	149	5		46
Puntland	34	81	1		43
South West	47	127	3		48

BACKGROUND

There is a major data gap on curative service utilization by children. Health facility data on outpatient (OPD) visits among under-fives are an indicator of access to curative services.

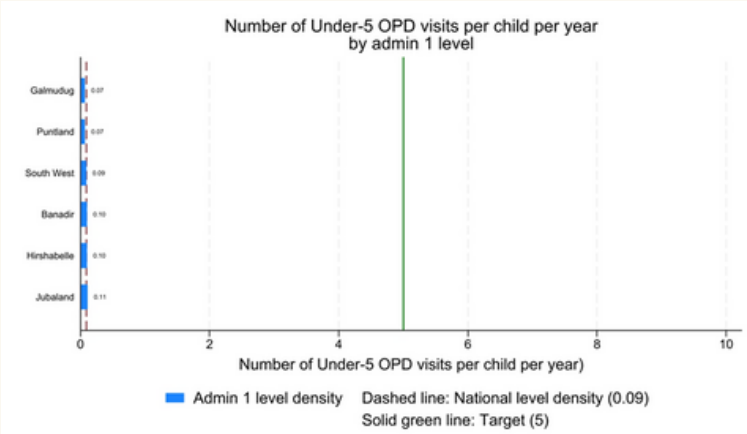
INTERPRETATIONS

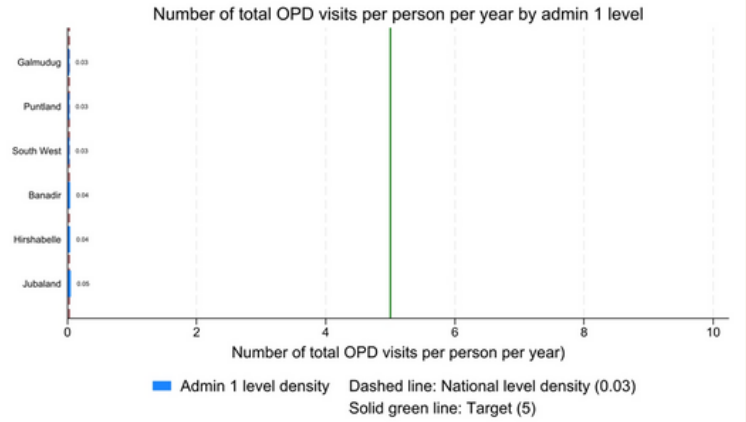
- What can be said about the data quality for OPD visits? Is there consistency of reported numbers between years? What is the % of OPD visits that are under-5 and are they within an expected range of 15-40%??
- What is the number of OPD visits per child per year during 2019-2023, is it increasing? Is it lower than 1 visit per year, which is considered indicative of low access? What % of OPD visits are for children under 5?
- What can be said about the OPD visits per child per year by region/province in 2023? How large is the difference between top and bottom regions?

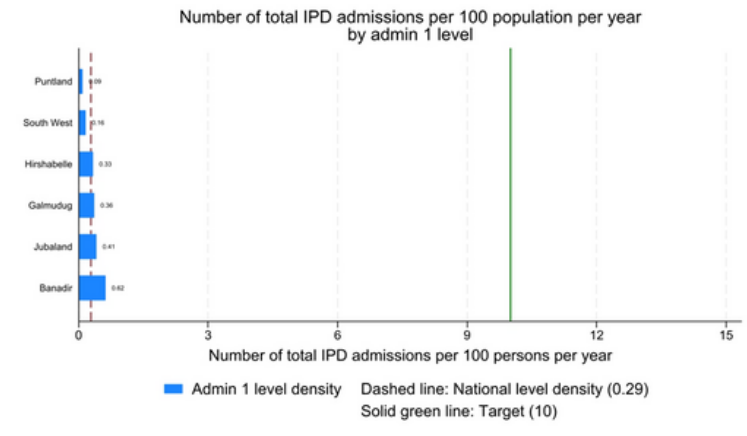
6 Health system performance assessment: indicators

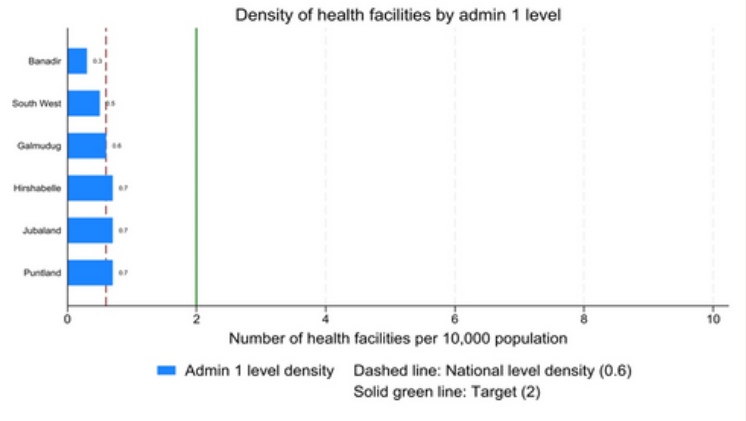
BACKGROUND

Subnational analyses of health system inputs and service outputs are critical: districts and regions are key units of the health systems and their service delivery. This includes assessment of system inputs (health workforce, infrastructure) and outputs (use, coverage).

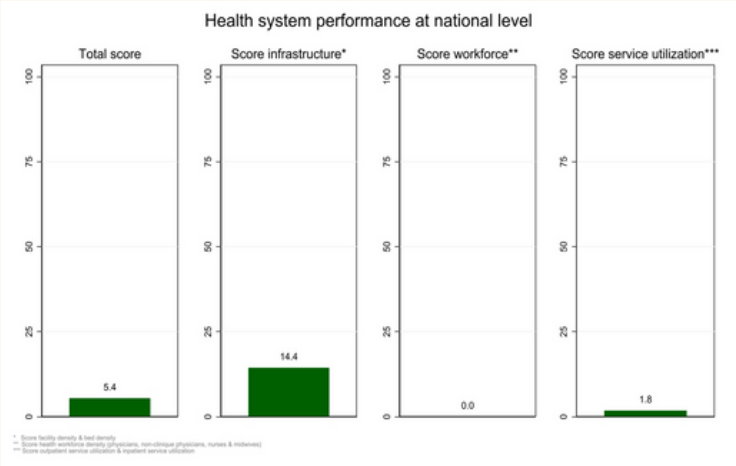


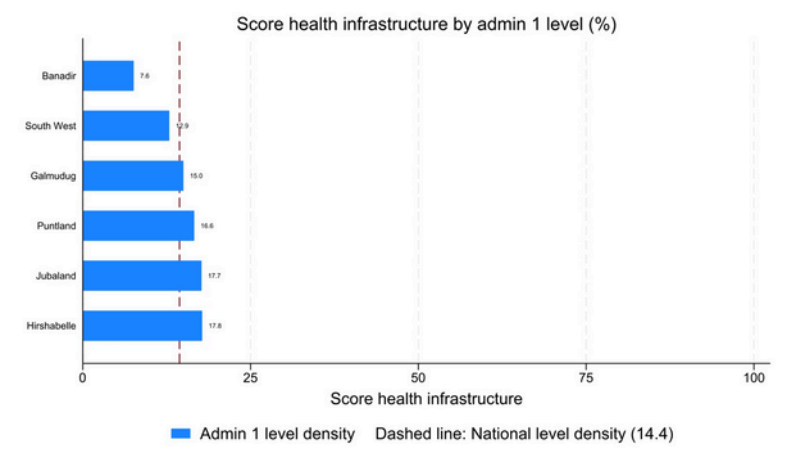


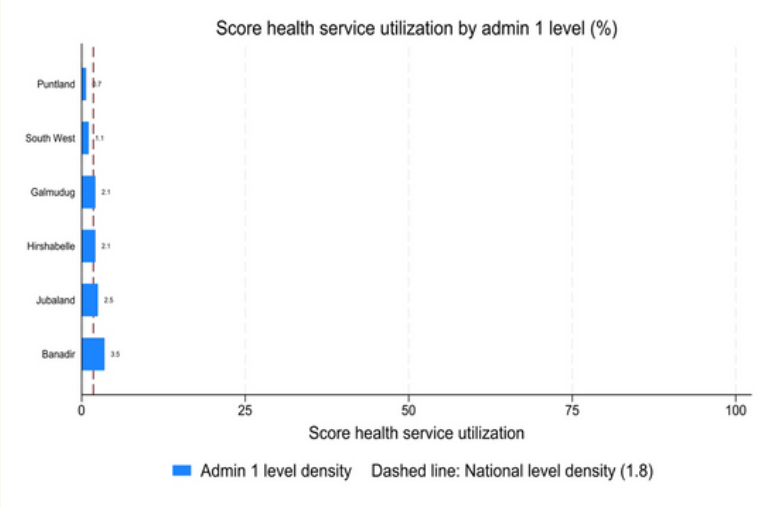


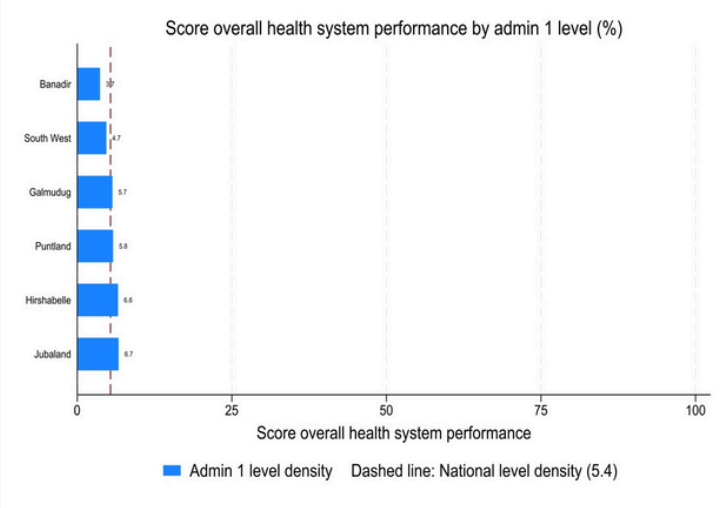


6 Health system performance assessment: indicators









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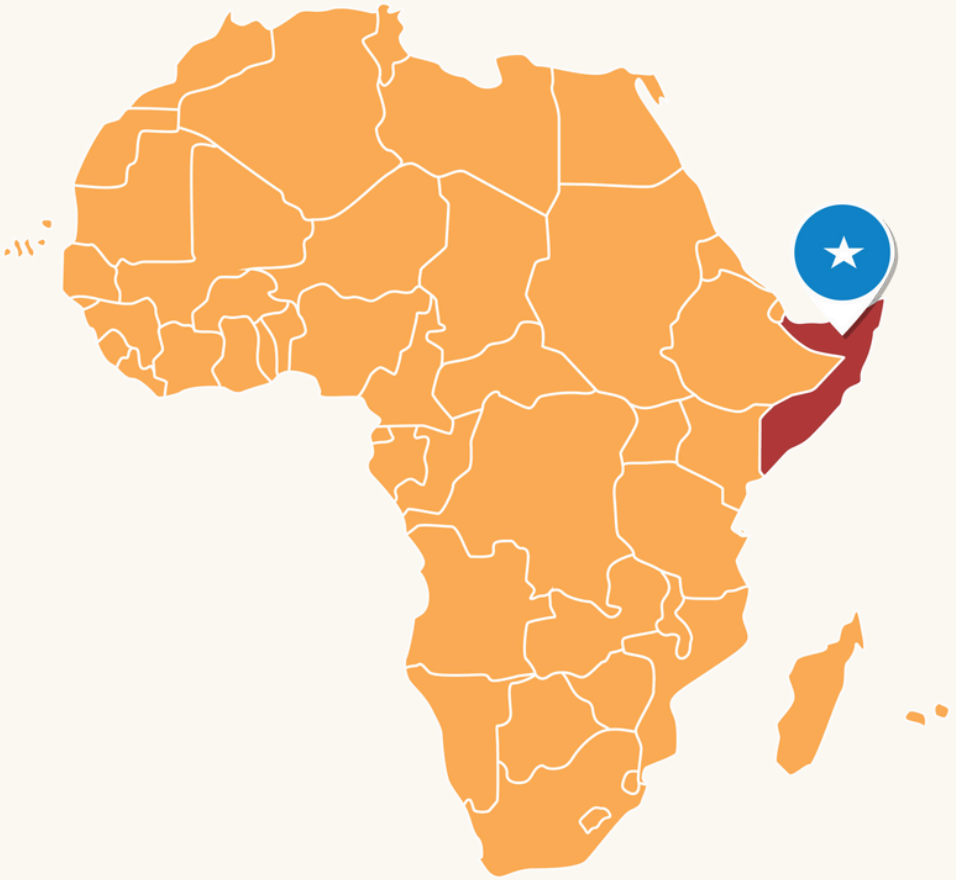
2019-2023



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