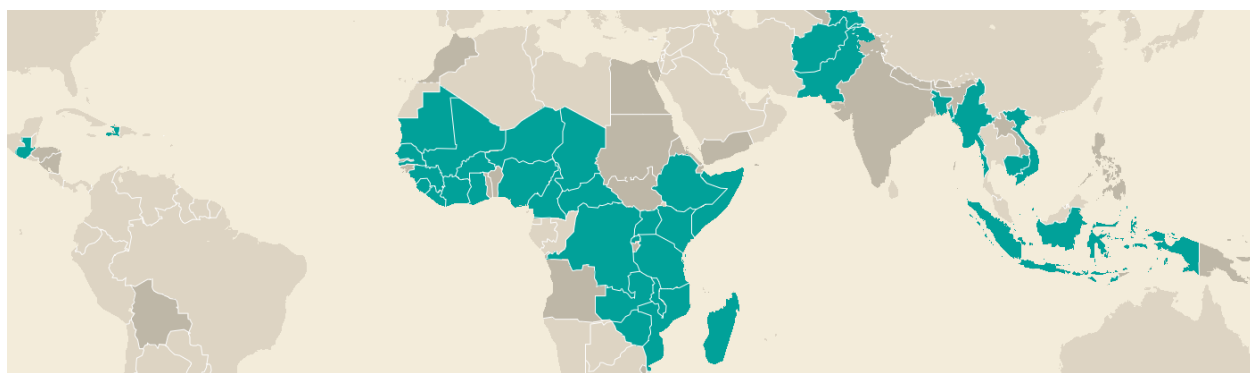# Progress in reproductive, maternal, newborn and child health and nutrition in the 36 GFF- supported countries

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

May 2023

Contents

Figures

Tables

Executive summary

This report describes overall country progress in core areas of reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH-N) during 2018-2023 in 36 GFF-supported countries. It focuses on a set of indicators on mortality, nutrition, coverage, and inequalities from the GFF results framework. The analysis is primarily based on available household survey data and global estimates.

Maternal and newborn health

- Maternal mortality was estimated at 354 per 100,000 live births for the 36 GFF-supported countries in 2020. Although this represents a drop from 391 in 2015, the estimated pace of decline was faster only in 13 of the 36 countries during 2015-2020 compared to the previous five-year period of 2010-2015. These trend estimates have large uncertainty intervals and only 14 of the 36 countries collected new maternal mortality data after 2015, so they should be interpreted with caution.

- On average, reductions in stillbirths and neonatal mortality were achieved in the GFF countries between 2015 and 2021. The stillbirth rate declined in 34 of the 36 GFF-supported countries (Burkina Faso and Zimbabwe were the exceptions) and the median stillbirth rate dropped from 22 to 19 per 1,000 births. Neonatal mortality declined in 35 of the 36 GFF countries (Madagascar was the exception), and the median rate dropped from 27.5 in 2015 to 25 per 1,000 live births in 2021.

- A five-phase mortality transition model combining maternal, stillbirth, and neonatal mortality shows that three of the GFF-supported countries were still in the first or highest mortality phase by 2020: Chad, Nigeria, and Central Africa Republic. Nearly half of the 36 countries (17) were still in the second phase, including Haiti, two in Asia (Afghanistan and Pakistan), nine in West and Central Africa, and five in Eastern and Southern Africa. Fourteen countries were in (mostly early) phase III, and two countries (Guatemala and Tajikistan) were in phase IV where the global SDG and ENAP targets are for these mortality indicators.

- Major increases in the institutional delivery rate have occurred in the GFF supported countries. In 22 countries with recent surveys, median coverage increased from 65% to 80% between 2015 and 2019 (median years of household surveys). These increases, however, were primarily driven by births in lower-level health facilities (health centers or smaller) rather than in hospitals where emergency obstetric and neonatal care are more likely to be available.

- The coverage of antenatal care with quality (assessed based on a score combining measures of the timing of the first antenatal care visit, frequency of antenatal care visits, and the contents of care received) varies across the 36 GFF-supported countries. High coverage levels of good quality antenatal care occurred more frequently in countries with lower mortality (e.g., Vietnam and Ghana) compared to the highest mortality countries in the GFF portfolio (e.g., Chad, Afghanistan). Coverage inequities are pervasive, with the wealthiest pregnant women considerably more likely to receive high quality antenatal care compared to their poorest counterparts in almost all 36 countries. Inequalities between the wealthiest and poorest pregnant women were particularly large in most GFF countries in West and Central Africa, several countries in Eastern and Southern Africa (e.g., Tanzania and Madagascar), as well as in Bangladesh, Haiti, and Pakistan.

- Every mother-baby dyad should receive antenatal care, skilled delivery, and postnatal care. Trend analysis of a co-coverage measure that examines whether mother-baby dyads received all three of these interventions shows that coverage levels in all but one GFF-supported country with available data improved over time. Substantial gains were achieved in almost every GFF country in Eastern and Southern Africa, and most countries in West and Central Africa. However, universal coverage is still far from being achieved and large inequalities in coverage persist between mother-baby dyads in the poorest and richest households across the GFF-supported countries.

Child health and nutrition

- Mortality in children under five years of age declined between 2015 and 2021 in 35 GFF-supported countries (Madagascar's rate stayed roughly the same and the median dropped from 67 per 1,000 live births to 57 during this time interval). However, declines occurred at a slower pace during 2015-2021 compared to 2010-2015 in 25 of the 36 countries. Child mortality at 1 to 59 months declined faster on average than neonatal mortality, leading to increasing proportions of deaths in the neonatal period in many of the 36 countries.

- In 2020, the median estimated prevalence of stunting in children under five years was 30% for 35 GFF-supported countries (no estimates were available for Tajikistan), ranging from 15% in Ghana to 47% in Niger. All 35 countries achieved reductions in stunting prevalence, with a median absolute reduction of 3.4 percentage points during 2015-2020.

- Coverage levels of three doses of pentavalent vaccine across the GFF supported countries stagnated around 85% in 2018 and 2019 and declined to 80% in 2020 and to 78% in 2021. Only two countries experienced 3 percentage points or higher gains in coverage between 2018 and 2021 (Chad and Vietnam), and 14 GFF-supported countries experienced declines of more than 3 percentage points. Coverage levels in the remaining 20 GFF-supported countries hovered around the same coverage level (plus or minus 3 percentage points) in 2021, compared to 2018.

Adolescent fertility and family planning

- Adolescent fertility in the 36 GFF countries gradually declined from a median of 106 births per 1,000 girls aged 15 to 19 years in 2018 to 101 births per 1,000 girls 15-19 years in 2021. Nineteen GFF-supported countries still had adolescent fertility above 100 per 1,000 girls aged 15-19 years by 2021.

- Family planning coverage (i.e., demand satisfied for family planning with modern methods) has increased on average across the GFF supported countries since 2015. The median coverage increased from 45% in 2015 to 54% of currently married women in 2021. Most GFF countries in West and Central Africa had low coverage levels of modern contraceptive methods. Near universal coverage levels were achieved in Zimbabwe, Indonesia, and Malawi, and coverage increases of 10 percentage points or more were achieved in Guinea, Senegal, Burkina Faso, Uganda, and Rwanda between 2015 and 2021.

The results are encouraging in terms of several intervention coverage indicators (delivery care and modern family planning), stunting, and adolescent fertility, but immunization coverage has dropped and rates of decline in maternal, neonatal, and child mortality are slowing down. Progress needs to be accelerated in most GFF supported countries to achieve the SDGs and the ENAP-EPMM targets. At the

current pace, only 8 out of the 36 countries will achieve the EPMM maternal mortality target of 140 deaths per 100,000 live births by 2030, for example, and most GFF countries need to accelerate progress to achieve SDG 3.2.1 and 3.2.2 (28 countries need to accelerate progress towards the under five mortality target and 30 for the neonatal mortality target). The good news is that four countries have achieved SDG 3.2.1 for under-five mortality (Cambodia, Guatemala, Indonesia, Vietnam) and four countries are on track to achieve the target by 2030 (Bangladesh, Malawi, Senegal, Tajikistan). Some countries have made real progress towards reducing inequalities in RMNCH coverage between the poorest and richest households, but in most, the gaps are large and reducing very slowly. Disruption to services due to COVID-19 were generally small but the impact on women's, children's, and adolescents' health may still be substantial over time, pending global economic trends and country specific rates of recovery.

Introduction

The Countdown to 2030 for Women's, Children's, and Adolescents' Health (Countdown), a global collaboration of academic institutions, international agencies, and civil society, aims to generate evidence to improve the health of women, children, and adolescents in low- and middle-income countries. In addition to its work on global and regional monitoring and measurement, Countdown focuses on working with country public health institutions and ministries of health in Global Financing Facility (GFF) supported countries to assess progress and performance of country programs and investment cases, and to strengthen country analytical capacity. Such Countdown country collaborations have been established in 24 countries.

This document is the third of these annual reports. It is based on data publicly available to the Countdown and provides a general assessment of the current situation and progress in the initial 36 GFF priority countries. The focus is on key indicators of the GFF results framework organized into three main areas: maternal and newborn health, child health and nutrition, and fertility.

This analysis describes changes that occurred in the GFF supported countries post-2015 and especially from 2018. The results should not be interpreted as attributable solely to the GFF for several reasons. Firstly, the GFF principles and strategy are about supporting national health plans as part of country-owned processes and aligning collective domestic and international investments. Second, the start date of GFF investment cases varies greatly across the 36 countries: The baseline year for seven countries was before 2017, projects for 20 countries became effective during 2017 to 2020, six countries completed their investment cases between 2020 and 2022, and three countries were still developing their investment cases by mid-2023 (Table 1). Third, data limitations preclude a detailed progress assessment in several countries. This year, we primarily relied on global estimates, which are predictions, because the implementation of household surveys was affected by the COVID-19 pandemic in 2020 and 2021. Table 1 summarizes the most recent national population-based surveys conducted in the 36 countries.

Most countries conducted at least one comprehensive RMNCAH and nutrition survey (Demographic and Health Surveys, Multiple Indicator Cluster Surveys, or other) that ended in 2018 or later. Only Somalia, Mozambique, Myanmar, Guatemala, and Haiti had no recent survey. In addition, several countries completed national topic-specific surveys such as family planning (PMA 2020), nutrition or malaria indicator surveys (MIS) (Table 1). There was, however, a major pause in the implementation of national household surveys due to the COVID 2019 pandemic in 2020 and 2021, which negatively affected the availability of more recent data for this report in several countries.

Table 1. GFF-supported countries with GFF investment case (IC) first year and national surveys by type, 2018-2022

Country	GFF IC	DHS	MICS	NNS	MIS	PMA	Other
West & Central Africa							
Burkina Faso	2019	**2021***		2018	2018	2021	
Cameroon	2017	2018			**2022***		
Central African Republic	2021		2018/19	2019			
Chad	2022		2019	2019			
Cote d'Ivoire	2020	**2021***			2018		
DR Congo	2019		2018				
Ghana	2021		2018		2019		
Guinea	2020	2018			2021		
Liberia	2016	2019/20			**2022***		
Mali	2021	2018			2021		
Mauritania	-	**2019/21**	2018	2018			
Niger	2021				2021	2017	**2021**
Nigeria	2017	2018	**2021**		2021		
Senegal	2019	2019			2021		
Sierra Leone	2017	2019	2017				
Eastern & Southern Africa							
Ethiopia	2015	2019			2018		
Kenya	2014	**2022***			2020	2017	
Madagascar	2021	**2021**	2018				
Malawi	2019		2019/20		2017		
Mozambique	2018				2018		
Rwanda	2018	2019/20			2017		
Somalia	2022						
Tanzania	2016	**2022***		2018	2017		
Uganda	2017	**2022***			2019	2018	
Zambia	2022	2018					
Zimbabwe	2022	2018	2019				
Asia							
Afghanistan	2017						2018
Bangladesh	2016	**2022***	2019				
Cambodia	2021	2021/22					
Indonesia	2018	2017					
Myanmar							
Pakistan	-	2018		2018			
Tajikistan	-	2017					
Vietnam	2019		2020/21	2017			
Latin America & Caribbean							
Guatemala	2020						
Haiti		2017					

*Data not yet available.

DHS Demographic and Health Survey, MICS Multiple Indicator Cluster Survey, NNS National Nutrition Survey; MIS Malaria Indicator Survey; PMA Family planning survey; GFF start is the year the investment case was signed.

Maternal and newborn health

Maternal mortality: latest estimates and trends

The global SDG target 3.1 for maternal mortality is 70 maternal deaths per 100,000 live births by 2030. The Ending Preventable Maternal Mortality (EPMM) initiative includes an additional target of no country having a maternal mortality ratio (MMR) exceeding 140 in 2030.[1] Major findings of the United Nations (UN) maternal mortality estimates (2023 release)[2] included:

- In 2020, the MMR was 430 per 100,000 live births (80% uncertainty interval (UI)[3]: 378-505) in the low-income country group and 255 (80% UI: 223-313) in the lower- and middle-income country group.
- During 2010-2020, the MMR declined by 24% in the low-income countries and by 17% in the lower-middle income countries, which was faster than the global decline (12%).
- In 2020, sub-Saharan Africa was the only region with an MMR above 140 per 100,000 live births: 536 (80% UI 470-640). South Asia was the second highest mortality region at 138 per 100,000 live births (80% UI: 122-160). About 70% of the estimated 287,000 maternal deaths in the world occurred in sub-Saharan Africa (with 30% of livebirths in the world in 2020).

The median MMR based on the UN estimates for the 36 GFF supported countries, all of which are either low or lower-middle income countries, was 354 per 100,000 live births in 2020, down from 492 in 2010 and 391 in 2015. The top five countries with highest MMR in the 36 countries were Chad (1063), Nigeria (1047), Central African Republic (835), Somalia (621) and Liberia (620). All GFF supported countries except Cambodia and Vietnam had lower mortality estimates in 2020 than in 2015, though uncertainty intervals were overlapping for all countries suggesting that the measured declines were not statistically significant. The pace of decline was faster during 2015-2020 than 2010-2015 in just 13 of the 36 countries.

If the GFF countries continue at the same slow pace of decline as during 2015-2020, only eight would reduce their MMR to less than the EPMM target of 140 per 100,000 live births by 2030 (Tajikistan, Bangladesh, Myanmar, Indonesia Mozambique, Zambia, Ethiopia, Tanzania).

Maternal mortality data availability is still poor for most low- and middle-income countries, making the estimates of levels and trends uncertain. For the 36 GFF countries in 2020, the uncertainty interval was on average -30% to +50% from the MMR estimate. Hence, comparisons between countries and over time should be made with caution.

Except for Tajikistan, no other GFF-supported country currently has a reliable death registration system. Fourteen countries conducted a DHS or MICS survey with sibling survival questions for maternal mortality in 2018 or later (Burkina Faso, Cameroon, Cambodia, Cote d'Ivoire, Liberia, Mali, Mauritania, Nigeria, Rwanda, Sierra Leone, Pakistan, Tanzania, Zambia, Zimbabwe). Unfortunately, surveys give only a crude approximation of maternal mortality and estimates generally refer to the period of seven years preceding the survey.[4] Some countries included maternal mortality questions in the census, with variable

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[1] https://www.who.int/reproductivehealth/topics/maternal_perinatal/epmm/en/
[2] World Health Organization. Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. February 2023.
[3] 80% uncertainty intervals means that there is a 90% probability that the true value is above the lower bound and a 90% probability that the true value lies below the upper bound.
[4] To be able to compare with previous surveys maternal mortality estimates include accidental deaths (also referred to as pregnancy-related mortality).

success. Mozambique produced estimates of its maternal mortality ratio from a newly established national mortality surveillance system, which estimated MMR at 391 per 100,000 live births for 2019-2020[5].

Countdown is working with country health facility data on maternal mortality (and stillbirths) in 22 GFF-supported countries in sub-Saharan Africa. As more women are delivering in health facilities, the institutional maternal mortality data will provide an increasingly important input into the estimation of not only institutional but also population-based maternal mortality. Currently, all reporting systems in the 22 countries have major underreporting of maternal and early neonatal deaths and stillbirths. A reform agenda that involves working with these systems to identify and address data quality issues is a basic step towards improving maternal mortality statistics and should be undertaken in all GFF-supported countries.

Stillbirths and neonatal mortality: latest estimates and trends

Although there is not an SDG target specific to stillbirths, the Every Newborn Action Plan (ENAP) has set a target of 12 stillbirths per 1,000 births by 2030 for all countries. The most recent round of UN estimates includes stillbirth rates for the year 2021 (published in January 2023)[6]. Highlights included:

- In 2021, the stillbirth rate was 22 (90% UI: 19.0-23.5) per 1,000 births in low-income countries and 16 per 1,000 births (90% UI: 15-19) in the lower-middle income country group.

- During 2010-2021, the stillbirth rate declined by 13% in the low-income countries and by 24% in the lower-middle income countries, compared to a global decline of 18%.

- In 2021, sub-Saharan Africa had the highest stillbirth rate: 21 per 1,000 births (90% UI 19.5-24). South Asia had a major decline from 32 to 17 per 1,000 births during 2010-2021. The two regions accounted for 79% of the nearly 1.9 million stillbirths in the world (including 47% in sub-Saharan Africa and 32% in south Asia).

In the GFF supported countries, the stillbirth rates ranged from a low of 9 per 1,000 births in Indonesia and Tajikistan to a high of 34 per 1,000 births in Pakistan (the highest estimate for any country in the world). The median stillbirth rates for the 36 countries declined from 22.1 in 2010, to 20.3 in 2015 and 19.3 per 1,000 births in 2021. All countries experienced declines since 2015, except Burkina Faso and Zimbabwe. The uncertainty intervals from the modeling are large: median for the 36 countries was -29% to + 44% around the estimated stillbirth rates. The wider the uncertainty interval, the greater the caution should be when interpreting the estimates as most trends are unlikely to be statistically significant.

SDG 3.2 includes a target (3.2.2) for all countries to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births. Major findings of the latest round of UN neonatal mortality estimates published in 2022 showed that:[7]

- In 2021, the neonatal mortality rate was 26.7 deaths per 1,000 live births (90% UI: 24.1-32.4) in low-income countries and 21.2 per 1,000 live births (90% UI: 19.6-23.7) in lower-middle income country group.

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[5] Macicame I, Kante AM, Wilson E, et al. COMSA-Mozambique study team. Countrywide Mortality Surveillance for Action in Mozambique: Results from a National Sample-Based Vital Statistics System for Mortality and Cause of Death. Am J Trop Med Hyg. 2023 Apr 10;108(5_Suppl):5-16.

[6] Never forgotten: the situation of stillbirth around the world. Report of the Interagency-Group for Child Mortality Estimation (IGME). UNICEF, 2023.

[7] Levels & Trends in Child Mortality: Estimates developed by the United Nations Inter-agency Group for Child Mortality Estimation. UNICEF, 2022.

- During 2010-2021, the neonatal mortality rate declined by 18% in low-income countries and by 28% in lower-middle income countries, compared to a global decline of 21%.

- In 2021, sub-Saharan Africa had the highest neonatal mortality rate: 27 deaths per 1,000 live births (90% UI 24-32). South Asia was the second highest with 23 deaths per 1,000 live births (90% UI 21-25). The two regions accounted for 81% of the 2.3 million neonatal deaths in the world (including 46% in sub-Saharan Africa and 35% in South Asia).

In the GFF-supported countries, neonatal mortality ranged from 13 deaths per 1,000 live births in Guatemala to 31 deaths per 1,000 live births in Pakistan in 2021. The median neonatal mortality rate for the 36 countries declined from 27.5 to 25 deaths per 1,000 live births during 2015-2021. The 2021 rates were lower than 2015 in all countries, except in Madagascar where there was no change.

An integrated assessment of progress in maternal, stillbirth and neonatal mortality

Maternal mortality, stillbirths, and neonatal mortality are highly correlated, reflecting the interconnectedness of maternal and newborn health. We developed an approach for combining these three mortality statistics to better describe their interrelationships and trends over time.[8] We combined stillbirth and neonatal mortality into one measure: stillbirth + neonatal deaths per 1,000 births and then examined maternal mortality and stillbirth + neonatal mortality together. Figure 1 shows the maternal mortality ratio in 2020 by the stillbirths + neonatal mortality in 2021 for the 36 countries, as part of an integrated mortality transition model. The model has five transition phases, from high mortality to low mortality (phases I to V). The global SDG targets for 2030 are in phase IV, based on global maternal mortality ratio target of 70 and a stillbirth + neonatal death rate of 24 (resulting from summing the 12 deaths per 1,000 live births SDG3.2 target for neonatal mortality and the ENAP stillbirth target of 12 stillbirths per 1,000 births). The transition phases can be characterized by typical patterns, based on country evidence during 2000-2020. These typical patterns include changes in cause of death distribution, fertility, health service coverage, inequalities, and health system characteristics, as well as socioeconomic changes.

Figure 1 shows the country situation of maternal, stillbirth, and neonatal mortality for the 36 GFF supported countries according to the latest UN estimates for the year 2020. Table 2 summarizes the country situation according to the mortality phases in the transition model. A country must have achieved both mortality thresholds (for maternal, and for stillbirth + neonatal mortality) to move to the next phase. Three West African countries were still in phase I because of their high MMRs, 18 countries were in phase II. Ten countries, including five in sub-Saharan Africa were in phase III and moving towards the global targets. Only Guatemala and Tajikistan were in phase IV. No countries were in phase V.

The joint assessment of maternal mortality with stillbirth and neonatal mortality permits the identification of outliers. Pakistan stands out because of its high stillbirth + neonatal mortality compared to its maternal mortality levels. Kenya is an example where the maternal mortality estimate is considerably higher than one would expect based on the stillbirth + neonatal mortality rate, which may be due to an unusually high UN estimate of maternal mortality (likely related to the fact that no new data were available from the last household survey in 2014 and no projected decline since 2010).

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[8] Boerma T, Campbell O, Amouzou A et al. Maternal mortality, stillbirths, and neonatal mortality: a transition model based on analyses of 151 countries. Lancet Global Health, in press.

Figure 1.   Maternal mortality per 100,000 live births by stillbirths and neonatal mortality per 1,000 births, mortality transition model with 5 phases, 2020
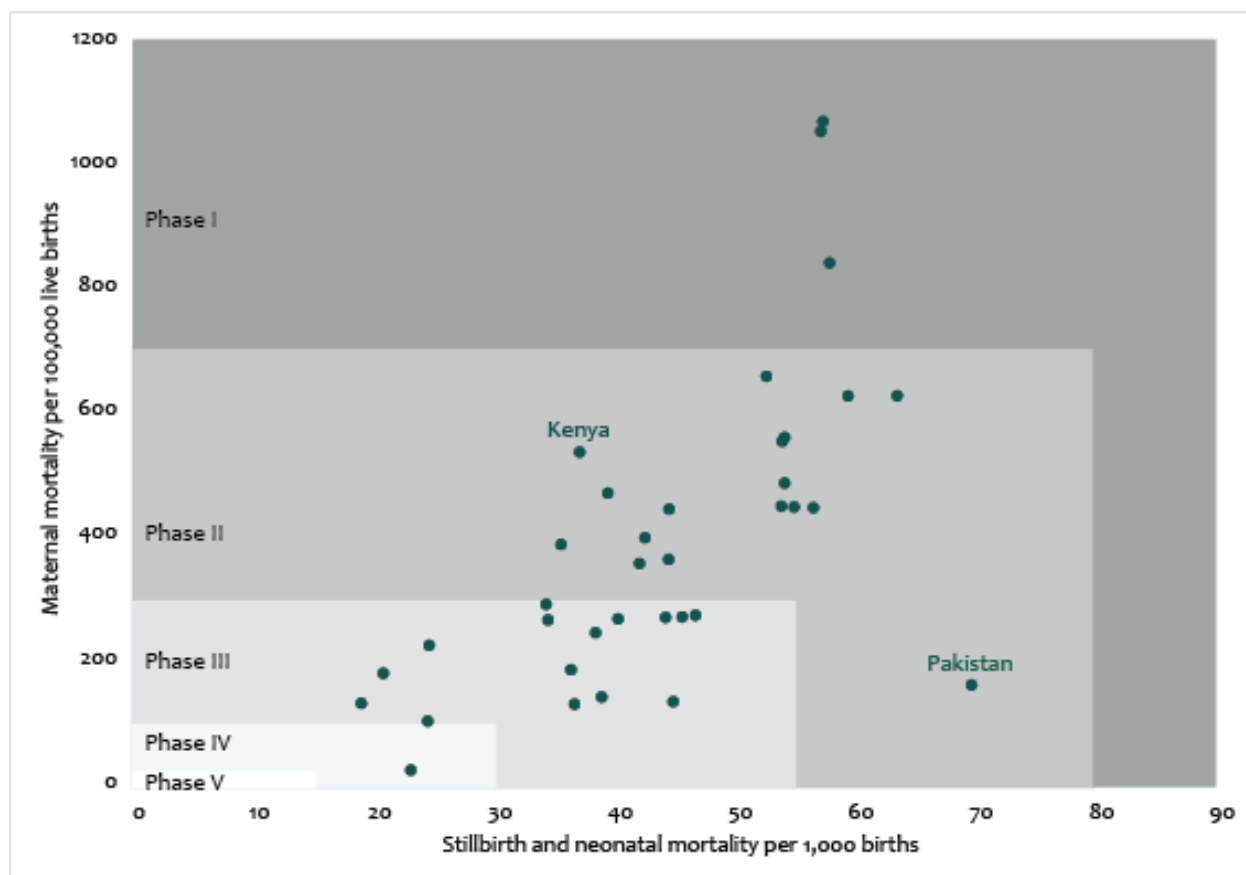
Table 2.   GFF-supported countries: Situation for MMR and stillbirths + neonatal mortality by phase of a maternal, stillbirth and neonatal mortality transition, based on UN mortality estimates for 2020 (MMR) and (stillbirth and neonatal)

Phase	Maternal mortality per 100,000 live births MMR	Stillbirth+ neonatal deaths per 1,000 births	Country
I	>= 700	>= 80	Chad, Nigeria, Central African Republic
II	300-700	55-80	Afghanistan, Pakistan, Haiti Cote d'Ivoire, Guinea, Liberia, Mali, Mauritania, Niger, Sierra Leone Cameroon, DR Congo Kenya, Madagascar, Malawi, Somalia, Zimbabwe
III	100-300	30-55	Bangladesh, Cambodia, Indonesia, Myanmar, Vietnam Ethiopia, Mozambique, Rwanda, Tanzania, Uganda, Zambia Burkina Faso, Ghana, Senegal
IV	20-100	15-30	Tajikistan, Guatemala
V	<20	< 15	-

Transitions in coverage of births by health facilities

A key feature of the maternal, stillbirth and newborn mortality transition is the increase of births in health facilities as countries progress. The typical increase, based on medians derived from analysis of over 300 surveys since 2000, is shown in Figure 2. The transition from an average low of around 32% institutional birth coverage in phase I to 56% in phase II was primarily driven by a large increase in births in lower-level health facilities (health centers, health posts, etc.). Further progress in the mortality transition, however, is characterized by major increases of births in hospitals.

Figure 2.   Place of birth by mortality transition phase, based on 301 household surveys in 121 countries, 2000-2020
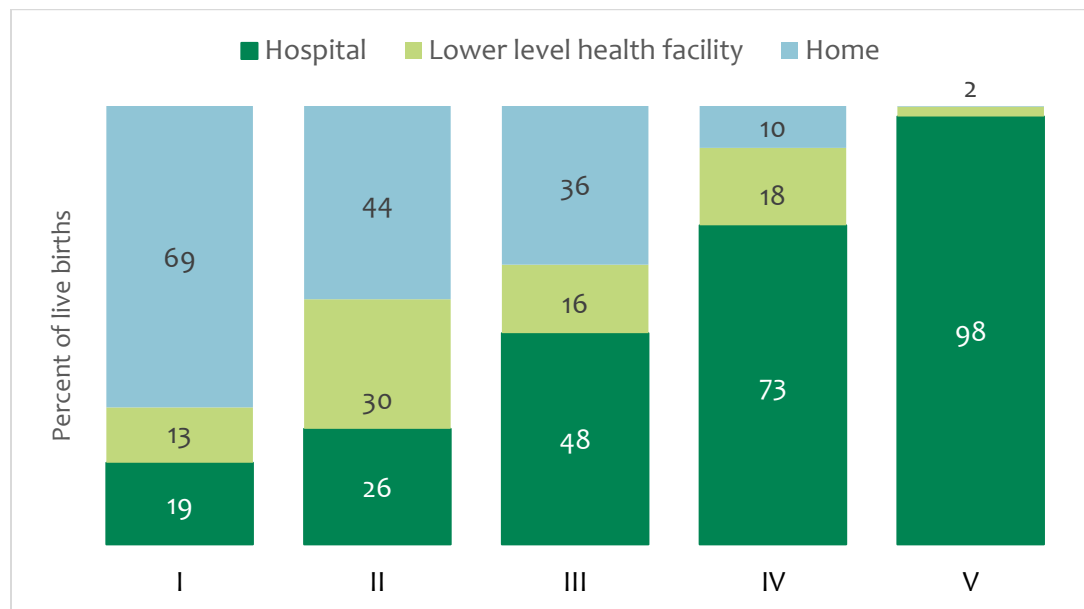
The 36 GFF-supported countries are no exception to this pattern. More women are delivering in health facilities in almost every GFF-supported country compared to 10 years ago. According to the most recent national surveys in 22 GFF supported countries in sub-Saharan Africa, the percent of live births occurring in health facilities was 80% or higher in 12 of the 22 countries. The 22-country median was 80% (interquartile range (IQR): 67-84%) for the most recent surveys (median year 2019), up from 65% (IQR: 57-76%) in the preceding survey round (median year 2015).

The increases in institutional delivery coverage in the GFF supported countries as part of a transition from phase I to II and progress within phase II were primarily driven by lower-level facilities. To advance to phases III and IV more emphasis needs to be put on deliveries in health facilities that can provide emergency obstetric and neonatal care. Countdown has now embarked on a multi-country analysis project with teams from the 22 GFF supported countries in sub-Saharan Africa to assess these countries' delivery patterns (e.g., proportion of deliveries at home and in types of health facilities) and determinants (e.g., supply and demand side factors driving changes in institutional delivery rates) as they progress along the mortality transition. The project will use data from household surveys, health facilities (routine health information

system data), and health facility assessments. A Liberia Countdown case study was a precursor to this project and has been published.[9]

Antenatal care with quality

Against a backdrop of increasing utilization of maternal and newborn health services across the GFF 36 countries, quality of care is a primary concern for achieving improvements in health outcomes. Quality of care is generally more difficult to measure than contact coverage such as antenatal care visits, institutional delivery, and postnatal care visits for mothers and babies. Some aspects of the content of these service contacts can be captured in household surveys through questions to women of reproductive ages.

Antenatal care (ANC) coverage indicators provide information about contacts with the health system. Complementary measures are needed on the content of care provided during service contacts. Household surveys such as Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), can give some insights into the timing of the first ANC visit, frequency, and contents of ANC visits, based on women's recall for her births in the last 2-3 years. The ANCq indicator is a content qualified ANC indicator and is a weighted indicator calculated as a score, composed of seven variables each allotted a specified number of points. The maximum score is 10 points based on intensity and basic contents of antenatal care, including the number of visits, the timing of the first visit, skilled provider contact in at least one visit, blood pressure measured, urine and blood taken for lab testing, and tetanus protection.[10]

Figure 3 presents the mean ANCq score for the most recent survey in the 36 GFF supported countries.[11] The countries have been grouped by mortality transition phase, as shown in Table 2. The ANCq score tends to go up as mortality declines but there is considerable variation across countries within phases. The lowest ANCq scores were observed in Chad (2014 DHS), Afghanistan (2015 DHS), and Ethiopia (2016 DHS). All three countries are performing far below other countries in the same mortality transition phase. This may be due in part to the time gap between the latest survey and the phase classification, which is based on mortality estimates for 2020. Notable is that three of the highest scoring countries are in West Africa and in phase II: Liberia (DHS 2019), Sierra Leone (DHS 2019) and Ghana (DHS 2017).

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[9] King J, Tarway-Twalla AK, Dennis M, et al.. Readiness of health facilities to provide safe childbirth in Liberia: a cross-sectional analysis of population surveys, facility censuses and facility birth records. BMC Pregnancy Childbirth. 2022 Dec 20;22(1):952.

[10] Arroyave L, Saad GE, Victora CG, Barros AJD. A new content-qualified antenatal care coverage indicator: Development and validation of a score using national health surveys in low- and middle-income countries. J Glob Health. 2021;11: 04008.

[11] comparable survey data were not available for Somalia and Tajikistan

Figure 3. Mean ANCq score based on latest household surveys in GFF supported countries (2011-2021), grouped by mortality transition phase.

Group	Country	Score
–	Chad 2014	4
	Nigeria 2018	5.7
	CAR 2018	6.5
=	Afghanistan 2015	3.6
	Kenya 2014	5.3
	Mali 2018	5.7
	Niger 2021	5.7
	Madagascar 2021	5.8
	Guinea 2018	5.9
	Mauritania 019	6.4
	DR Congo 2017	6.4
	Pakistan 2017	6.5
	Malawi 2019	6.8
	Cameroon 2018	6.9
	Cote d'Ivoire 2016	7.3
	Haiti 2016	7.3
	Zimbabwe 2019	7.5
	Sierra Leone 2019	8.1
	Liberia 2019	8.4
☰	Ethiopia 2016	4.2
	Mozambique 2011	5.8
	Myanmar 2015	6.2
	Uganda 2016	6.6
	Tanzania 2015	6.7
	Burkina Faso 2010	6.8
	Bangladesh 2019	7
	Zambia 2018	7.3
	Cambodia 2014	7.6
	Senegal 2019	7.7
	Indonesia 2017	7.7
	Ghana 2017	8.4
	Vietnam 2020	8.7
≥	Guatemala 2014	7.7

Figure 4 shows the large differences in ANCq scores, shown as the proportion of pregnant women having received almost all components (8-10 points on the 10-point ANCq score), within countries by wealth quintile. These results indicate a systematic monotonic increase of ANCq with wealth. In general, women belonging to poorest households had a lower proportion of having received between 8 and 10 points in the ANCq score than those women belonging to the wealthiest households indicating large inequalities by wealth quintile in the ANCq.

In countries in West and Central Africa, poorer women had much lower ANCq scores than wealthier women, except in Liberia, Sierra Leone and, to a lesser extent, Ghana. Several countries in Eastern Africa (e.g., Tanzania and Madagascar), as well as Bangladesh, Pakistan and Haiti also had large inequalities by wealth quintile in the ANCq score.

Figure 4.   Proportion of pregnant women having received between 8 and 10 points in the ANCq score by wealth quintile, GFF-supported countries, most recent surveys since 2015 with available data.

Note: Countries are ordered by ANCq mean. Source: 28 DHS and MICS, 2015-2021. WCA: West and Central Africa; ESA: Eastern and Southern Africa; SA: South Asia; EAP: East Asia and Pacific; LAC: Latin America and Caribbean
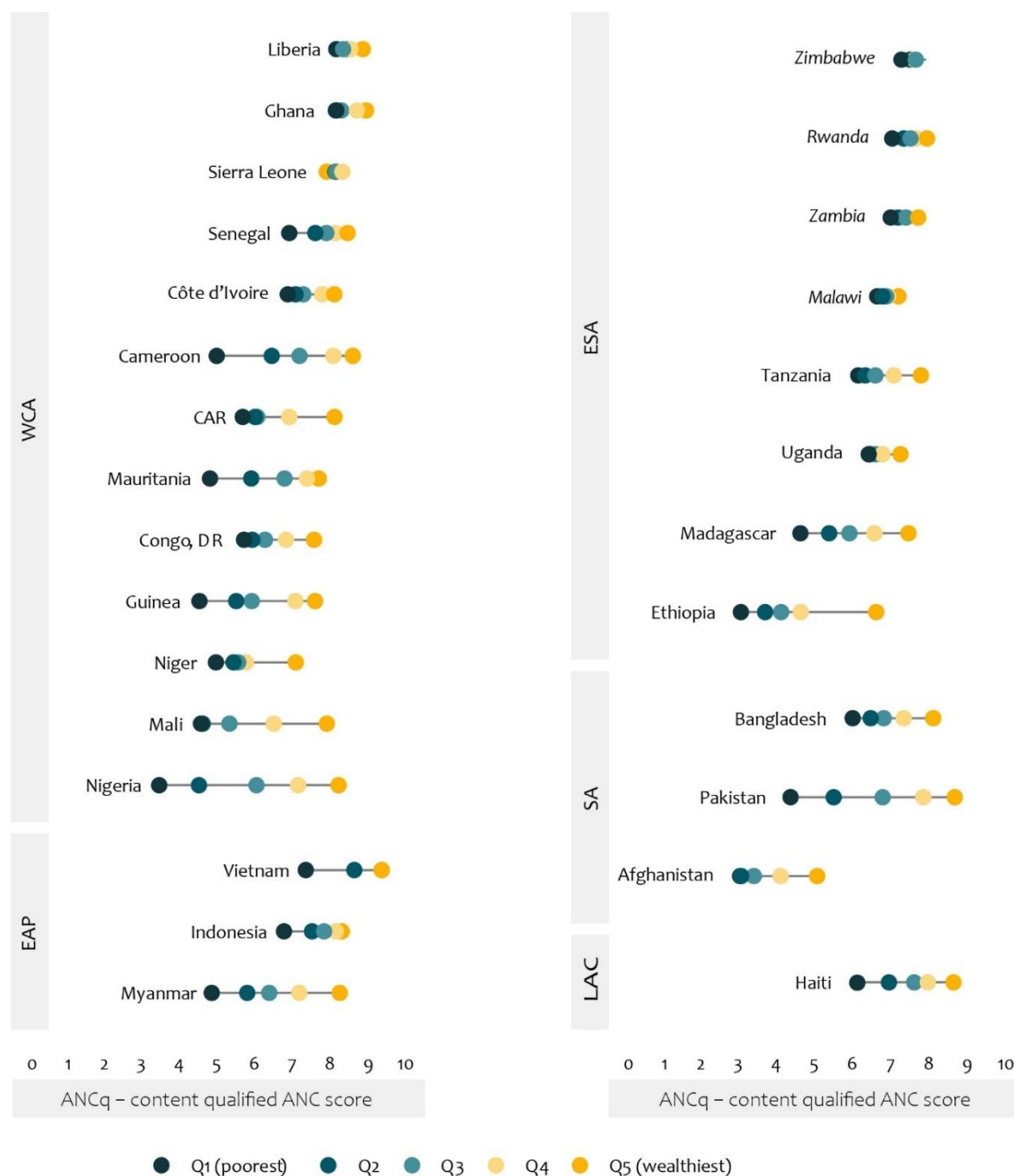
Co-coverage of maternal and newborn health services

All pregnant women and newborns need antenatal care, skilled delivery care, and postnatal care. The MNH co-coverage score combines antenatal care visits, institutional delivery, and postnatal care for mother and baby, capturing information on whether pregnant women and newborns had contact with essential services at each of the three stages of maternal health. This indicator is relevant for understanding patterns in maternal mortality, stillbirths, and neonatal mortality as well as health system performance.

The MNH co-coverage indicator is a numerical count score for each mother-baby dyad. One point is allocated to each intervention, ranging from a total score of zero to three, where zero represents no interventions received and three represents all interventions received. We also estimated the percentages of mother-baby dyads with 0 and with all 3 interventions.

Household surveys (DHS and MICS) are used to compute the MNH co-coverage score based on at least four antenatal care visits, institutional delivery, and postnatal care within two days of delivery (calculated as for mother, baby, or both).

Figure 5 shows the proportion of mother-baby dyads in the 30 GFF countries with available survey data since 2015 that received all three of the interventions in the MNH co-coverage indicator. Coverage of all three interventions ranged from a low of 11% in Afghanistan to a high of 83% in Vietnam. In 23 of the 30 countries, full coverage was below 50% of mother-baby dyads.

Figure 5.   Percentage of mother-baby dyads receiving all three interventions in the MNH co-coverage indicator, 30 GFF-supported countries with surveys 2015-2021, organized by sub-region

*Source: 30 DHS and MICS, 2015-2021. **WCA:** West and Central Africa; **ESA:** Eastern and Southern Africa; **EECA:** Eastern Europe & Central Asia; **SA:** South Asia; **EAP:** East Asia and Pacific; **LAC:** Latin America and Caribbean*
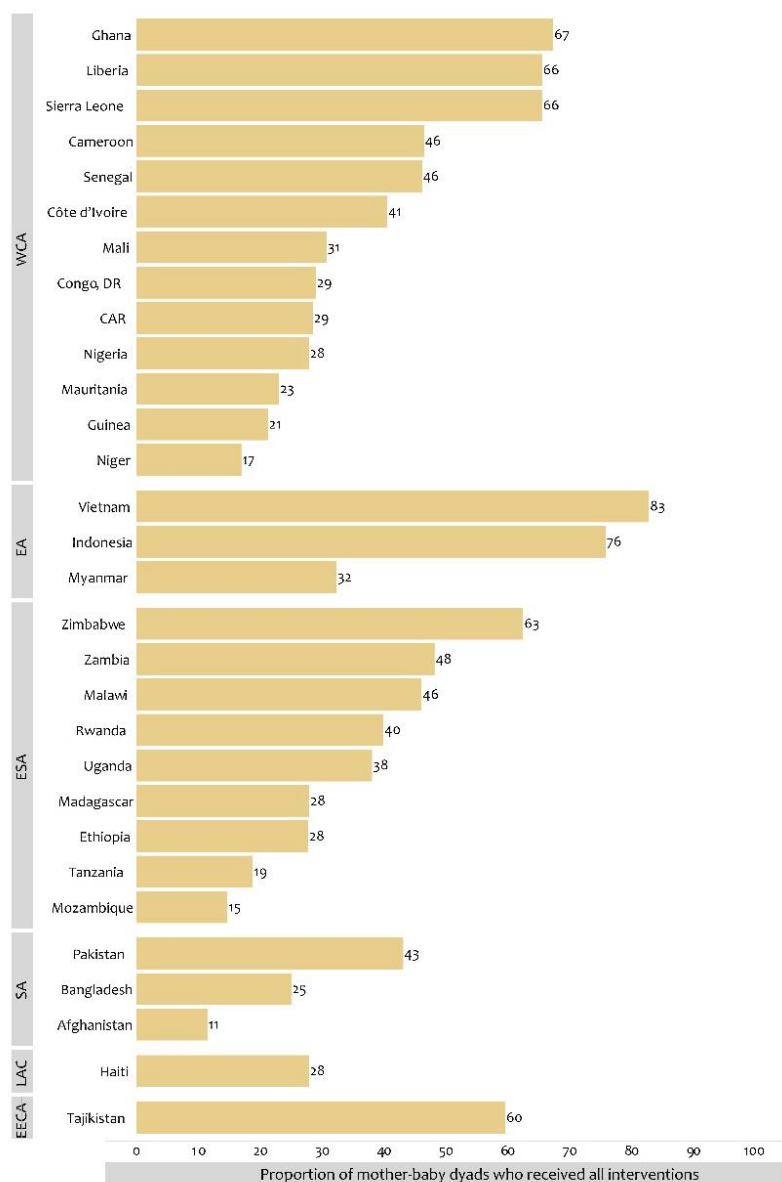
A considerable proportion of mother-baby dyads in the GFF countries with available data received none of the three interventions in the MNH co-coverage indicator (Figure 6). In 19 countries, over 10% of mother-baby dyads did not receive any of the three interventions, and in 4 of these countries, over 30% of mother-baby dyads experienced zero coverage.

Figure 6. Proportion of mother-baby dyads experiencing zero coverage, MNH co-coverage indicator (ANC4+, institutional delivery, PNC for mother and baby), GFF-supported countries, with surveys 2015-2021

Source: 19 DHS and MICS, 2015-2021.

Country	Percent
Niger	39
Afghanistan	36
Ethiopia	35
Nigeria	31
Guinea	26
Haiti	26
CAR	23
Bangladesh	22
Tanzania	21
Madagascar	20
Mauritania	19
Mali	17
Myanmar	17
Cameroon	16
Pakistan	16
Mozambique	15
Congo Democratic Republic	11
Cote d'Ivoire	10
Uganda	10

Percent of mother–baby dyads receiving no interventions

Although more progress is needed, particularly in countries with high percentages of mother-baby dyads receiving none of the three interventions, there was a positive trend in full MNH co-coverage in all but one GFF-supported country with two surveys since 2010 (Guinea was the exception) (Figure 7). On average the trends refer to about 2013 to 2018. Large increases were observed in almost all countries in Eastern and Southern Africa, such as Zimbabwe and Rwanda. Only Tanzania lagged in progress. In West and Central Africa, most countries made considerable progress as well, with some notable exceptions. The latter include Guinea (no progress), Nigeria and Niger. Ghana, which has the highest MNH co-coverage of the sub-Saharan Africa countries, made little progress as well, even though coverage is still far from universal. Indonesia and Vietnam had the highest co-coverage of the GFF-supported countries with available data, and both countries experienced increases in coverage during the survey intervals.

Figure 7.   Trends in full MNH co-coverage (ANC 4+ visits, institutional delivery, postnatal care) first and last survey since 2010, GFF supported countries with available data
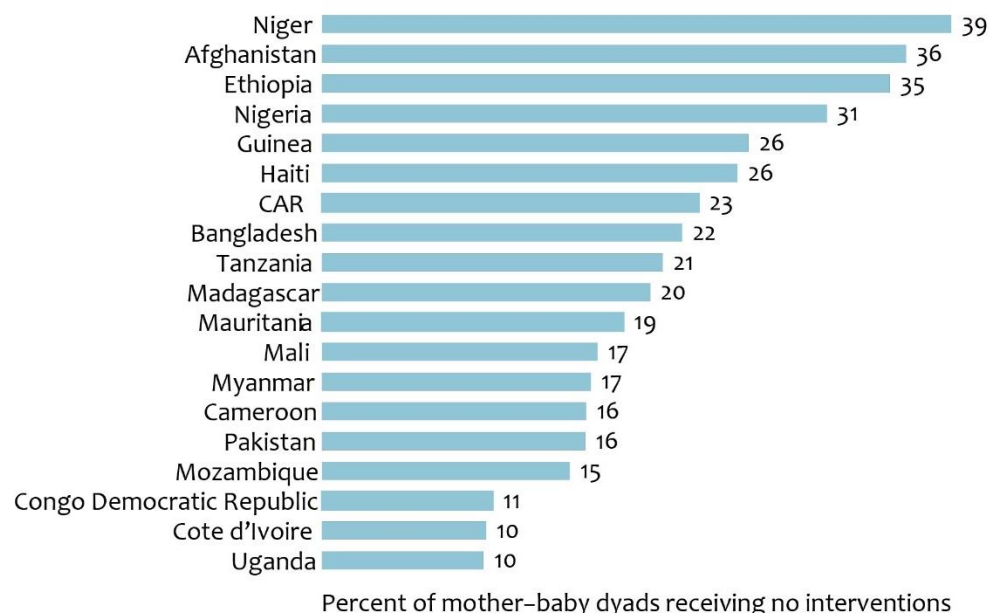
Note: Countries are ordered by MNH co-coverage mean. Source: 23 DHS and MICS, 2010-2021. **WCA:** *West and Central Africa;* **ESA:** *Eastern and Southern Africa;* **EECA:** *Eastern Europe & Central Asia;* **SA:** *South Asia;* **EAP:** *East Asia and Pacific*
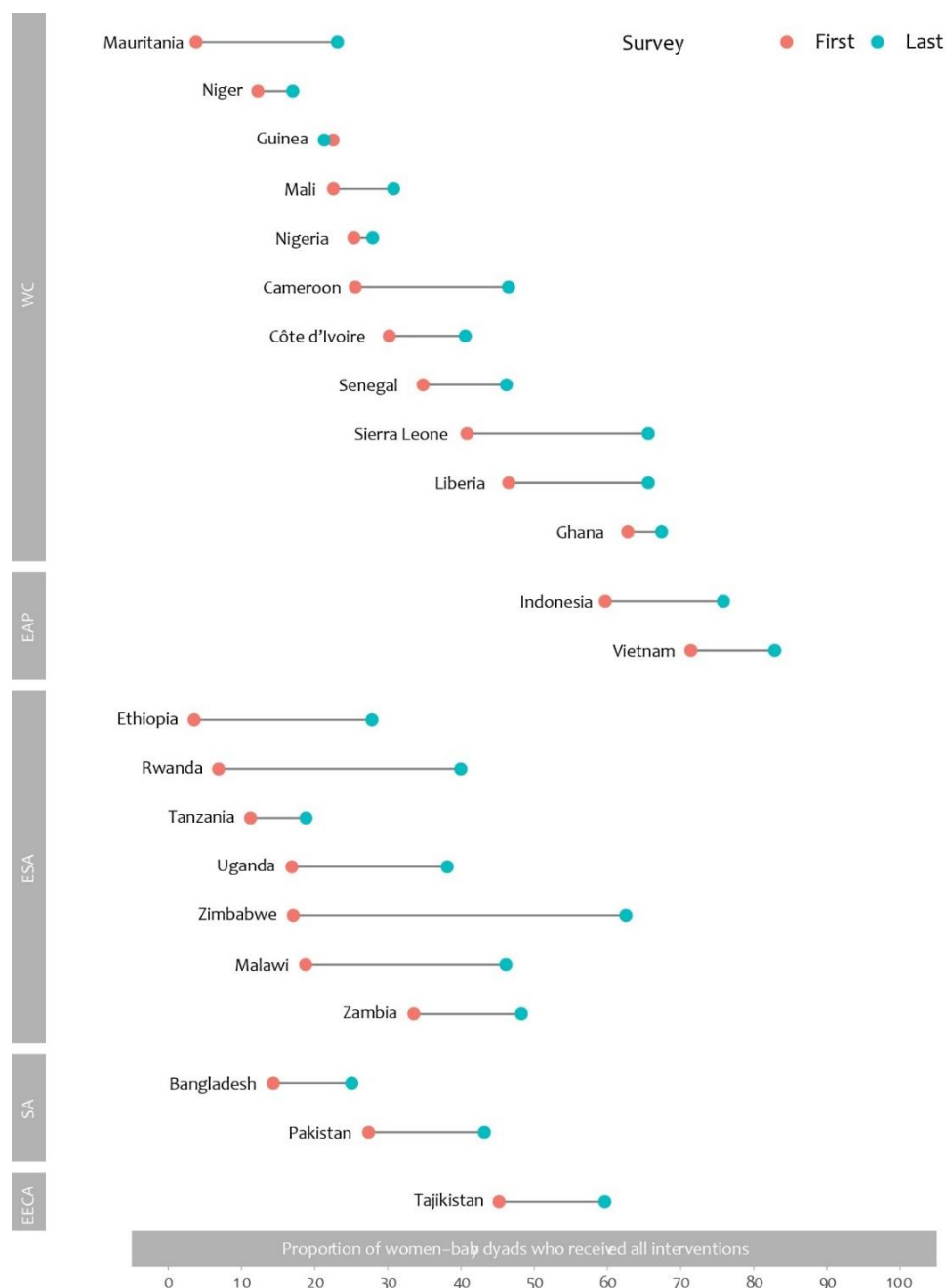
Large within country inequalities in full MNH co-coverage by wealth were observed in most GFF countries, especially for countries in West and Central Africa (Figure 8), showing that mother-baby dyads from the wealthiest households presented higher proportions of having received all MNH interventions when compared to those from the poorest households. In West and Central Africa, only Liberia and Sierra Leone did not have large gaps in full MNH co-coverage between the poorest and richest mother-baby dyads. In Eastern and Southern Africa, inequalities were observed in all countries, and were especially large in Madagascar and Ethiopia. The eight countries in other regions all had large gaps.

Figure 8. Inequalities by wealth in full MNH co-coverage (ANC4+ visits, institutional delivery, postnatal care), most recent surveys, GFF-supported countries organized by sub-region
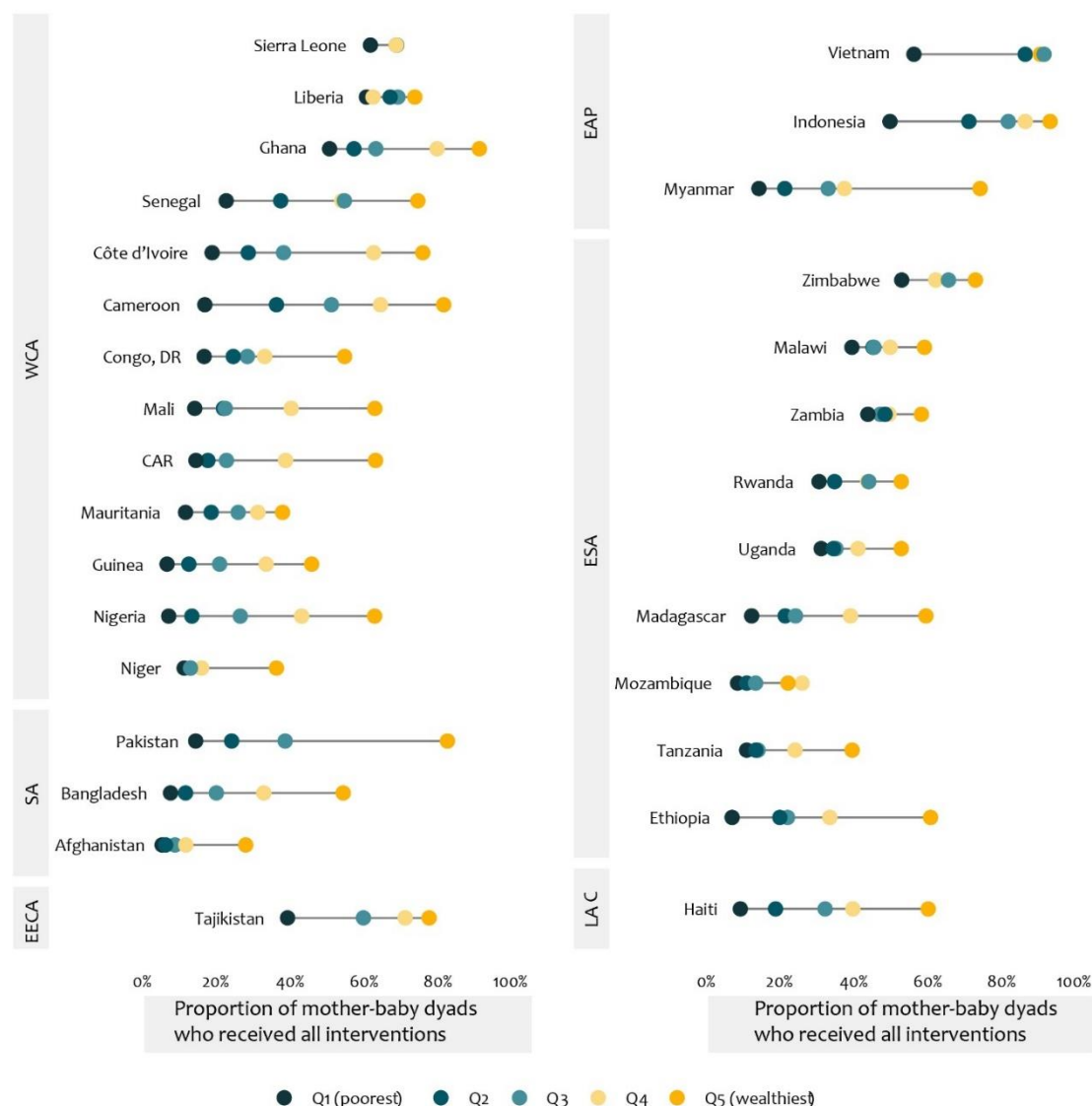
*Note: Countries are ordered by MNH co-coverage mean. Source: 30 DHS and MICS, 2015-2021. **WCA:** West and Central Africa; **ESA:** Eastern and Southern Africa; **SA:** South Asia; **EECA:** Eastern Europe & Central Asia; EAP; **EAP:** East Asia and Pacific; **LAC:** Latin America and Caribbean*

Child health and nutrition
Under-five mortality
Major findings from the UN IGME levels and trends report, launched December 2022,[12] include:

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[12] United Nations Inter-agency Group for Child Mortality Estimation (UNIGME), Levels & Trends in Child Mortality: Report 2022, Estimates developed the United Nations Inter-agency Group for Child Mortality Estimation, United Nations Children's Fund, New York, 2023.
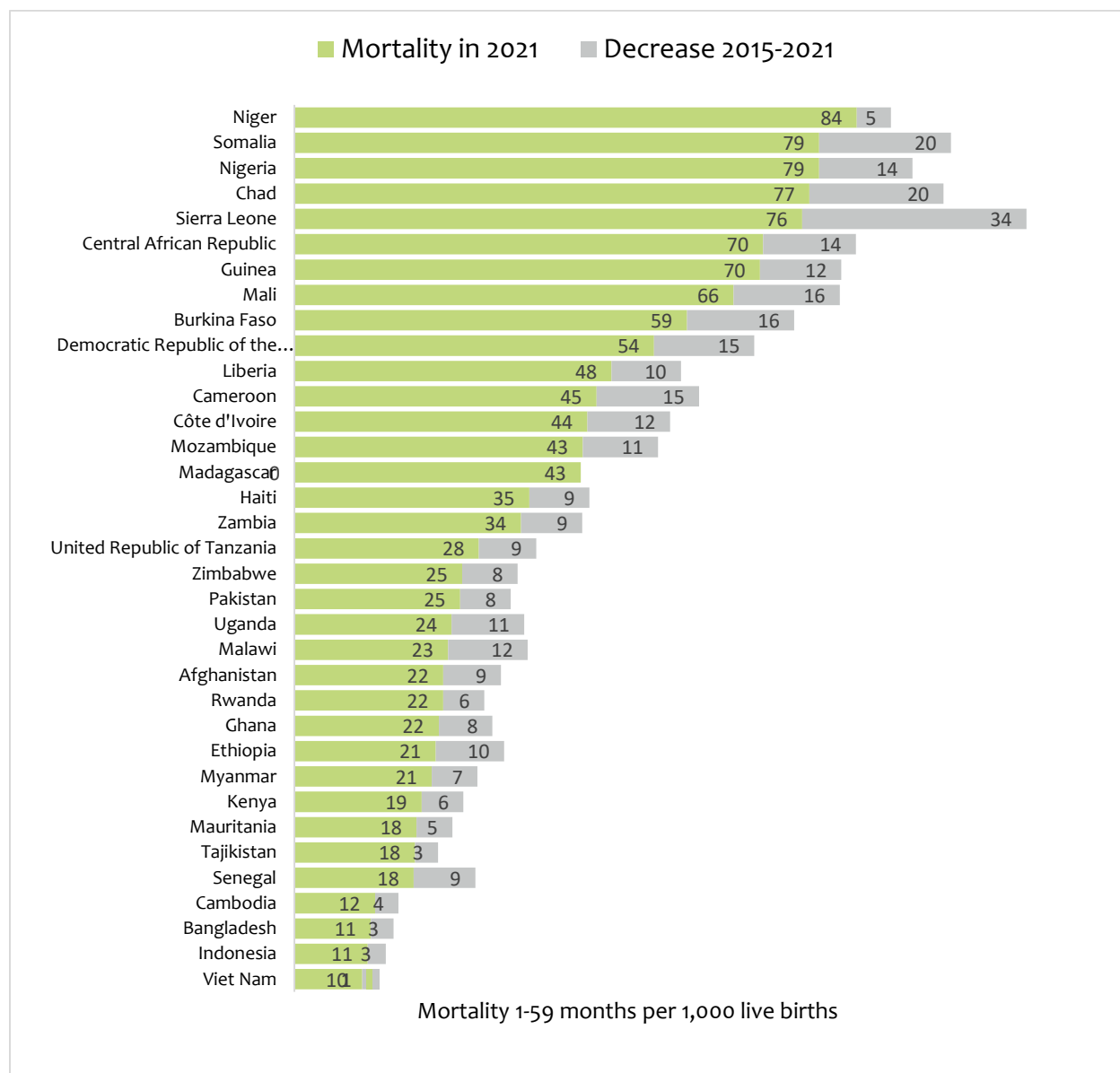
- In 2021, 5 million children died before reaching their fifth birthday. Of these, 2.3 million (47%) occurred during the first month of life.

- By 2021, under-five mortality was 67 deaths per 1,000 live births (90% UI: 62-80) in the low-income countries, and 44 deaths per 1,000 live births (90% UI (40-49) in the lower-middle income countries.

- During 2010-2021, under-five mortality declined by 29% in low-income countries and by 31% in lower-middle income countries. There was little evidence of a slower pace of decline during 2015-2021 compared to 2010-2015.

- In sub-Saharan Africa, under-five mortality declined by 28% during 2010-2021, from 102 to 74 deaths per 1,000 live births. However, 2.9 million or 58% of the total number of deaths in children under the age of five occurred in sub-Saharan Africa.

The median under-five mortality in the 36 GFF supported countries in 2021 was 57 deaths per 1,000 live births according to the UN-IGME estimates, down from around 67 in 2015 and 85 in 2010. Declines occurred in all but one of the GFF countries in the past five years. Only Madagascar's mortality rate stayed roughly the same. However, the average annual pace of reduction slowed during 2015-2021 compared to 2010-2015 (2.8% per year and 4.6%, respectively): in 25 of the 36 countries the pace of decline was slower in the more recent time period.

In 2021, five of the 36 countries still had estimated levels of under-five mortality exceeding 100 per 1,000 live births, including Niger, Somalia, Nigeria, Chad, and Sierra Leone. Three countries had mortality levels approximating 100 (Central Africa Republic, Guinea, and Mali). On the positive side, four countries reached the SDG 3.2 target of 25 child deaths per 1,000 live births (Viet Nam, Indonesia, Guatemala, and Cambodia). Bangladesh almost achieved the target at 27 per 1,000 live births in 2021. Figure 9 shows large differences on average in child mortality levels and trends between GFF countries in West and Central Africa compared to other subregions.

Focusing on mortality among children ages 1-59 months, major reductions occurred in almost all 36 countries between 2015 and 2021. UN estimates show continuing declines in mortality rates at 1-59 months during 2015-2020, and more than half of these country estimates include results from recent surveys (Figure 9). The median average annual rate of mortality decline was 4.1% per year, which was more than two times faster than neonatal mortality. Therefore, the trend of increased concentration of under-five deaths in the neonatal period is continuing. In 2010, 35% of all under-five deaths occurred in the neonatal period in the 36 countries, increasing to 40% in 2015 and 43% in 2020. This percent distribution, however, indicates that more than half of child deaths are still occurring after the neonatal period. Most of these deaths are from preventable and treatable causes such as pneumonia, diarrhea, and malaria.

Figure 9. Mortality at 1-59 months (after the neonatal period and before the fifth birthday) per 1,000 live births by country, 2015 and 2021, UN IGME estimates, 36 GFF-supported countries

Legend: ■ Mortality in 2021   ■ Decrease 2015-2021

Country	Mortality in 2021	Decrease 2015-2021
Niger	84	5
Somalia	79	20
Nigeria	79	14
Chad	77	20
Sierra Leone	76	34
Central African Republic	70	14
Guinea	70	12
Mali	66	16
Burkina Faso	59	16
Democratic Republic of the...	54	15
Liberia	48	10
Cameroon	45	15
Côte d'Ivoire	44	12
Mozambique	43	11
Madagascar	43	0
Haiti	35	9
Zambia	34	9
United Republic of Tanzania	28	9
Zimbabwe	25	8
Pakistan	25	8
Uganda	24	11
Malawi	23	12
Afghanistan	22	9
Rwanda	22	6
Ghana	22	8
Ethiopia	21	10
Myanmar	21	7
Kenya	19	6
Mauritania	18	5
Tajikistan	18	3
Senegal	18	9
Cambodia	12	4
Bangladesh	11	3
Indonesia	11	3
Viet Nam	10	1

Mortality 1-59 months per 1,000 live births

Stunting among children under 5 years

To ascertain trends in stunting in children under the age of five, we used UN estimates for 2015 and 2020, which are generally based on national surveys, such as DHS, MICS, nutrition surveys and socioeconomic surveys. In 2020, the median estimated prevalence of stunting in children under five years of age was 30% for 35 GFF-supported countries (no estimates for Tajikistan), ranging from 15% in Ghana to 47% in Niger. All countries reduced stunting prevalence, with a median absolute reduction of 3.4 percentage points during 2015-2020 (Figure 10).

Figure 10. Percent of children under-5 years who are stunted (below -2 SD height for age), global estimates for 2015 and 2020, GFF-supported countries (countries ordered by 2020 stunting prevalence how to low)


2020 **Decrease 2015-2020**

Country	2020	Decrease 2015-2020
Niger	46.7	0.5
Guatemala	42.8	3.4
DR Congo	40.8	0.9
Madagascar	40.2	5.1
CAR	40.1	1.6
Mozambique	37.8	3.9
Malawi	37	3.2
Pakistan	36.7	4.6
Nigeria	35.3	1.7
Ethiopia	35.3	4.8
Afghanistan	35.1	6
Chad	35	2.4
Rwanda	32.6	4.1
Zambia	32.3	5.3
Tanzania	32	3.3
Indonesia	31.8	1.1
Bangladesh	30.2	4.8
Cambodia	29.9	1.4
Guinea	29.4	3.3
Liberia	28	5.3
Uganda	27.9	2.8
Somalia	27.4	2.3
Cameroon	27.2	3.6
Sierra Leone	26.8	5.8
Mali	25.7	3.4
Burkina Faso	25.5	3.8
Myanmar	25.2	4.3
Mauritania	24.2	1.8
Zimbabwe	23	3.8
Viet Nam	22.3	2.1
Haiti	20.4	1.9
Kenya	19.4	4.9
Côte d'Ivoire	17.8	7.5
Senegal	17.2	2.3
Ghana	14.2	4.7

Percent of children 0-59 months who are stunted

Immunization coverage

The WHO/UNICEF (WUENIC) annual joint estimates are based on a reconciliation of reported coverage statistics based on routine health facility data and data from household surveys.[13] The estimates of coverage of three doses of DTP/pentavalent vaccine for the period 2018 to 2021 shows that the median coverage was stagnating at 85% in 2018 and 2019 and declined in 2020 (interquartile range (IQR) (42-91) to 80% and to 78% in 2021 (IQR 64-91).

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[13] https://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html

In 20 of the 36 countries, the difference between coverage of three doses of pentavalent vaccination in 2021 than in 2018 was less than 3 percentage points (Figure 11). Two countries increased their coverage rates by more than 3%: Chad (from 56% to 68%) and Vietnam (75% to 83%). For 14 countries, coverage was estimated to have declined by more than 3%. Myanmar is a major outlier with a dramatic decline in coverage from 91% to 37% in 2018 and 2021, respectively. Other countries with at least 10 percentage points decline included Mozambique (-27%), Indonesia (-18%), Liberia (-14%), Haiti (-13%) and Madagascar (-10%). Trends were also negative in Mauritania (-9%), Rwanda (-9%), Tanzania (-8%), Senegal (-7%), Afghanistan (-6%), DR Congo (-6%) and Guatemala (-6%). The COVID-19 pandemic has been considered a major cause of disruptions in immunization programmes, and more so than in other maternal and child health programs. Armed conflict may also have contributed to disruptions in several countries. Unfortunately, there are, at this point, no new survey data available to assess how these negative changes have affected all population groups of children or more specifically the poorest. Robust data are also not currently available to assess the pace of catch-up vaccination efforts.

Figure 11. Coverage of three doses of DPT3 (pentavalent vaccine) among infants among GFF countries in 2018 to and 2021, according to WHO/UNICEF estimates
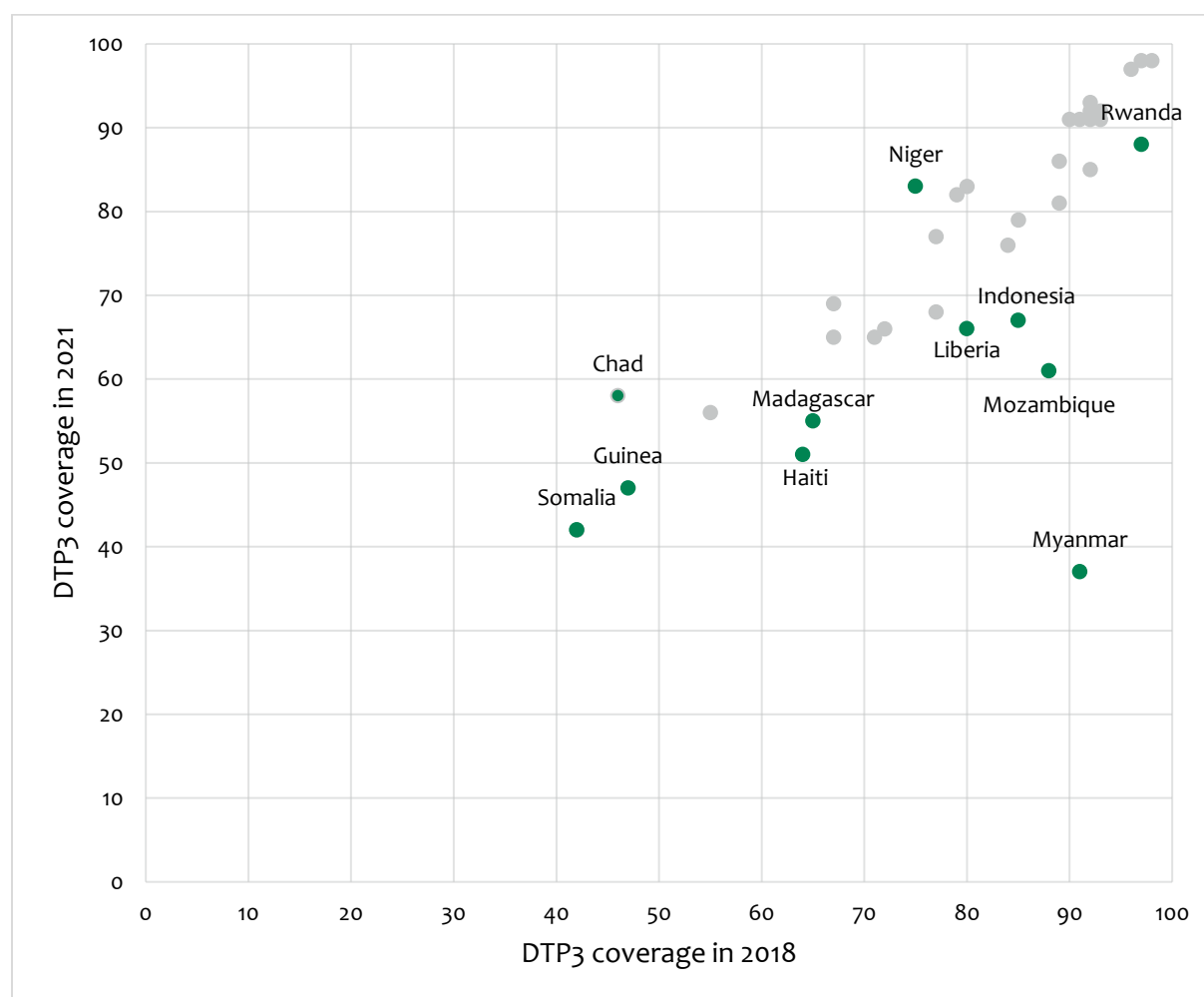
Reproductive health

According to the latest World Population Prospects report, the average fertility of the world's population was 2.3 births per woman over a lifetime in 2021[14]. Findings from this report indicate that sub-Saharan Africa is the only region where populations are expected to continue growing through 2100, and that eight countries will be responsible for more than half of the projected population increases through 2050 (Democratic Republic of the Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, The Philippines, and the United Republic of Tanzania). Of these eight, five are GFF-supported countries.

The median Total Fertility Rate for the 36 GFF supported countries in 2021 was 4.2, with a range of 6.8 in Niger and 1.9 in Viet Nam[15]. Continued high fertility rates and rapid population growth in many of the GFF-supported countries will impact their ability to achieve the SDGs, including responding to increased demands for health and other social services. Another challenge faced by several GFF-supported countries are high levels of adolescent fertility, which often negatively impacts the life chances of adolescent girls.

Adolescent fertility trends and child marriage rates

Because there are few recent surveys, we used the most recent UN estimates of adolescent fertility rates (defined as the number of live births among women 15-19 years) to ascertain trends among the 36 GFF-supported countries.[16] The median age-specific fertility rate for the 36 countries decreased from 114 per 1,000 women aged 15-19 years (IQR: 72-130) in 2015, to 106 (68-124) in 2018 and 101 (64-118) in 2021. The largest declines were estimated for Chad, Sierra Leone, Guinea, and Guatemala.

In 2021, 19 GFF-supported countries still had adolescent fertility rates above 100 per 1,000 women aged 15-19, mostly in West and Central Africa. Three countries had rates exceeding 150 per 1,000 women aged 15-19: Niger, Mozambique, and Chad.

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[14] United Nations Department of Economic and Social Affairs, Population Division (2022). *World Population Prospects 2022: Summary of Results.* UN DESA/POP/2022/TR/NO. 3

[15] https://population.un.org/dataportal

[16] https://population.un.org/wpp/Download/Standard/Fertility/

Figure 12. Adolescent fertility rate per 1000 girls 15-19 years, UN Population Division estimates, 2015 and 2021
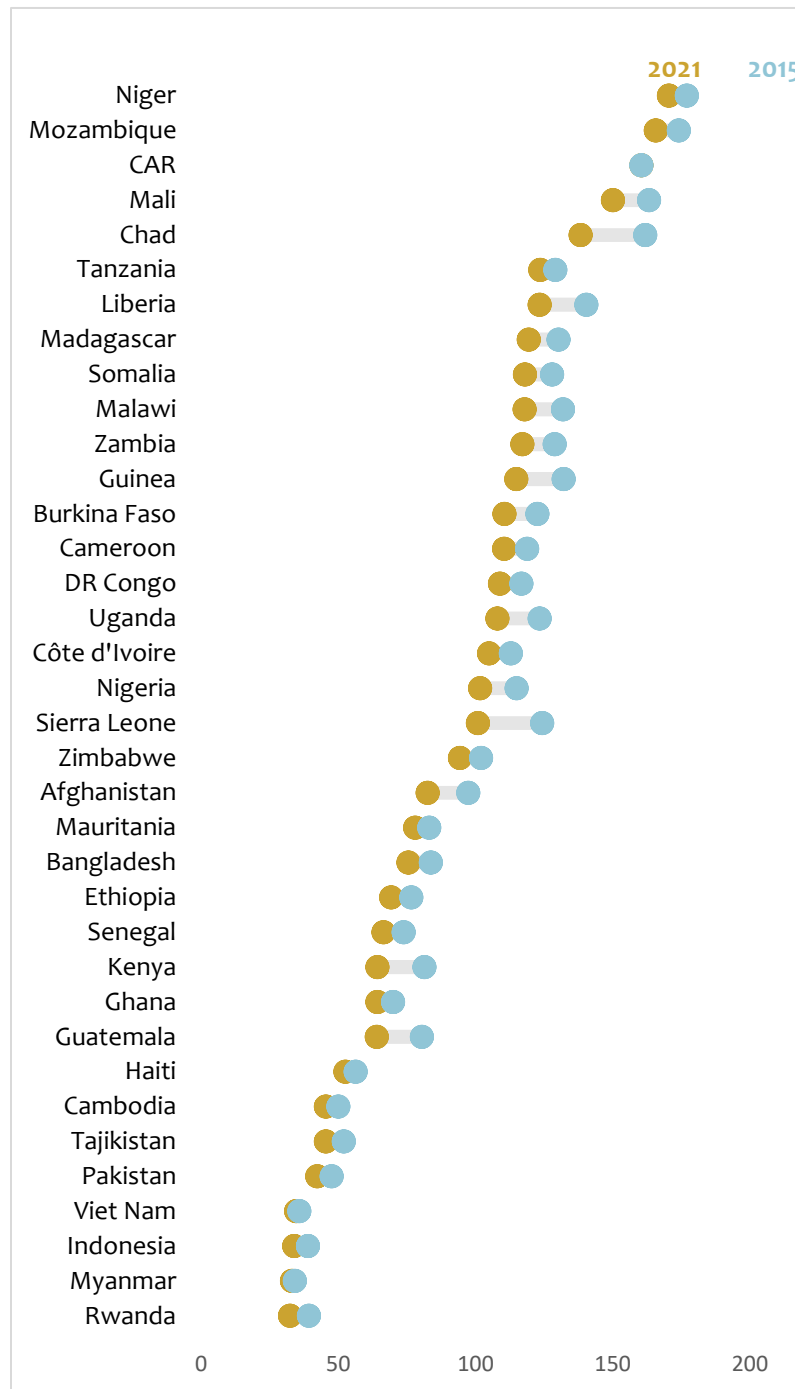
Although not all adolescents who become pregnant are married, child marriage rates for girls and adolescent fertility are highly correlated. According to the latest UN estimates on child marriage, the population weighted average and the median child marriage rate for girls in the 36 GFF countries is around 30%, substantially higher than the 19% global average[17]. The range in child marriage rates across the 36 countries is from a low of 6% in Rwanda to a high of 76% in Niger. Nine of the 36 countries had rates below the global average and 27 had rates above the global average.

Family Planning Coverage

Achievement of SDG target 3.7 on universal access to sexual and reproductive health services requires regular monitoring of key family planning indicators.

Based on the estimates generated using Track 20's Family Planning Estimation Tool (FPET) and published on the UN Population Division data portal,[18] the median family planning coverage (demand for family planning satisfied with modern methods) in the 36 GFF supported countries increased from 45% to 54% during 2015-2021 (Figure 12). In 2021, family planning coverage was just 4% in Somalia. Most countries in West and Central Africa

[17] Data on child marriage rates are drawn from the UNICEF global databases, 2023, based on Multiple Indicator Cluster Surveys, Demographic and Health Surveys and other nationally representative surveys. For detailed source information by country, see data.unicef.org. Demographic data are from the United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects 2022, Online Edition. Latest report on child marriage available here: file:///C:/Users/wb605020/Downloads/Is_an_End_to_Child_Marriage_Within_Reach-3.pdf
[18] https://population.un.org/dataportal/home

had low coverage with modern methods except Burkina Faso and Senegal where more than half of the demand for modern methods among currently married women was met (55% and 54%, respectively). Near universal coverage (80% or higher) was estimated for Zimbabwe, Indonesia, and Malawi.

Increases in family planning coverage occurred in virtually all GFF supported countries during 2015-2021. Only Niger experienced a decline (from 42% to 40%) and Indonesia remained at 81% coverage. The largest increases (10% or more) occurred in Guinea, Senegal, Burkina Faso, Uganda, and Rwanda.

Figure 13. Coverage with modern methods of family planning (demand satisfied) among currently married women 15-49 years, UN estimates 2015 and 2021

Note: Estimates based on the Family Planning Estimation Tool