

COVID-19 vaccination rollout in the World Health Organization African region: status at end June 2022 and way forward

Short Paper

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Abstract

In October 2021, the WHO published an ambitious strategy to ensure that all countries had vaccinated 40% of their population by the end of 2021 and 70% by mid-2022. The end of June 2022 marks 18 months of implementation of coronavirus disease 2019 (COVID-19) vaccination in the African region and provides an opportunity to look back and think ahead about COVID-19 vaccine set targets, demand and delivery strategies. As of 26 June 2022 two countries in the WHO African region have achieved this target (Mauritius and Seychelles) and seven are on track, having vaccinated between 40% and 69% of their population. By the 26 June 2022, seven among the 20 countries that had less than 10% of people fully vaccinated at the end of January 2022, have surpassed 15% of people fully vaccinated at the end of June 2022. This includes five targeted countries, which are being supported by the WHO Regional Office for Africa through the Multi-Partners' Country Support Team Initiative. As we enter the second semester of 2022, a window of opportunity has opened to provide new impetus to COVID-19 vaccination rollout in the African region guided by the four principles: Scale-up, Transition, Consolidation and Communication. Member States need to build on progress made to ensure that this impetus is not lost and that the African region does not remain the least vaccinated global region, as economies open up and world priorities change.

The African region is one of the six regions of the World Health Organization (WHO) and is made up of 47 [1] out of the 54 countries of the African continent. Nearly two and half years after the notification of the first laboratory-confirmed case of coronavirus disease 2019 (COVID-19) in Algeria, Africa continues to deal with the COVID-19 pandemic and its socio-economic impact [2]. Since the beginning of 2021, vaccination has been added to the COVID-19 response package of interventions. Forty-six out of the 47 countries of the African region are rolling out COVID-19 vaccination; Eritrea being the only country that has not yet introduced COVID-19 vaccination in their national response to the pandemic.

In October 2021, the WHO published an ambitious strategy to ensure that all countries had vaccinated 40% of their populations by the end of 2021 and 70% by mid-2022 [3]. The goal of this strategy was to substantially increase population immunity globally, prevent hospitalisations and thus protect health systems, prevent deaths, fully restart economies and lower the risk of new variants. The focus was first on protecting health workers and other essential workers, older people and people at high risk of severe disease and death because of comorbidities, advancing next to all adults, followed by adolescents [3].

The end of June 2022 marks 18 months of implementation of COVID-19 vaccination in the African region and provides an opportunity to look back and think ahead about COVID-19 vaccine set targets, demand and delivery strategies. This report summarises the progress made in rolling out COVID-19 vaccination in the WHO African region, highlights the challenges that have prevented the region from achieving set vaccination targets and goals, and provides guidance for giving a new impetus to COVID-19 vaccination rollout.

We used the regional database on COVID-19 vaccination maintained by the WHO regional office for Africa (WHO AFRO) from reports submitted by Member States for our analysis.

As of 26 June 2022, the WHO African region has received 625 million doses of COVID-19 vaccines including 66% from the COVID-19 Vaccines Global Access (COVAX) facility, 24% from bilateral donations, 8% from the African Vaccine Acquisition Task Team, and 2% purchased directly by governments through bilateral agreements. Doses received represent 40% of the doses needed to fully vaccinate 70% of people in all countries. Of doses received, 365.4 million doses have been administered (58.4%) and 10.7 million have

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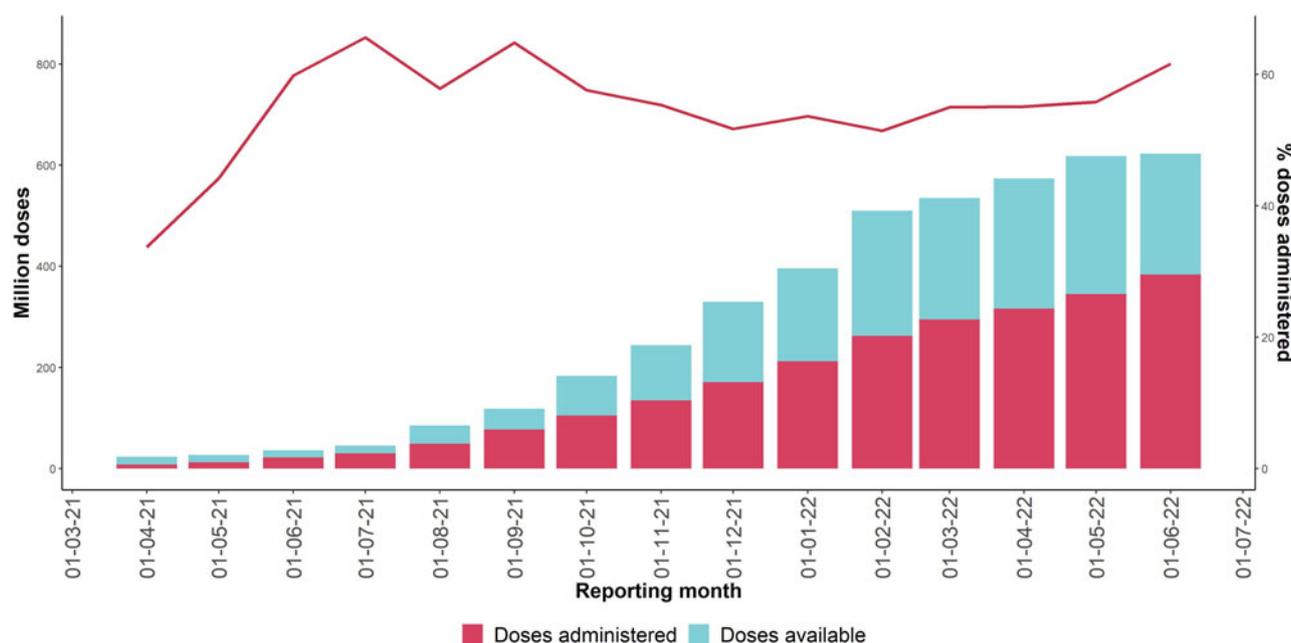


Fig. 1. Cumulative COVID-19 vaccines doses received and administered by month in the WHO African region (data as of 26 June 2022).

expired (1.7% of all doses received). Expiry of doses was mainly related to vaccines with a short shelf life at date of delivery in the context of low vaccine uptake. Figure 1 shows the distribution of the cumulative doses received and administered, from all sources, over time in the WHO African region. In the first six to nine months of COVID-19 vaccination rollout, vaccination services were mainly provided in fixed health facilities. As the attendance at fixed sites was dropping over time as the result of reduced risk perception, countries started, since the last quarter of 2021, to diversify services delivery strategies, deploying outreach and mobile teams in communities and implementing mass vaccination campaigns.

As of 26 June 2022, 193.6 million people have been fully vaccinated (completed a primary vaccination series), representing 17.3% of the region's population while 276.6 million people have received at least one dose of COVID-19 vaccines (24.7% of the region's population). Two countries have surpassed 70% of people fully vaccinated: Mauritius (74.4%) and Seychelles (82.1%). Both are high-income island nations with small populations and are among the countries with the highest Universal Health Coverage (UHC) service coverage index. Seven countries have vaccinated between 40% and 69% of their population: Lesotho (40.0%), Liberia (42.1%), Sao Tome and Principe (44.4%), Mozambique (45.1%), Cape Verde (55.3%), Botswana (64.3%) and Rwanda (66.8%). Nine countries are yet to surpass 10% of people fully vaccinated: Burundi (0.1%), Democratic Republic of Congo (2.5%), Madagascar (4.3%), Cameroon (4.6%), Malawi (6.0%), Mali (6.4%), Senegal (6.4%), United Republic of Tanzania (6.8%) and Burkina Faso (7.4%).

At the end of January 2022, 20 countries had less than 10% of people fully vaccinated. In response to this situation, the WHO AFRO conducted a country risk assessment of slow vaccination uptake, which resulted in the targeting of these 20 priority countries, most of which had less than 10% of people fully vaccinated at the end of December 2021. In response, WHO AFRO deployed

experts to these countries to support governments' efforts to scale up COVID-19 vaccination, as part of its Multi-Partners' Country Support Teams Initiative. Country Support Teams have helped targeted countries to diversify service delivery strategies combining health facility fixed sites with mobile and outreach teams, engaging more community leaders in demand creation activities. As a result, most of the targeted countries organised mass vaccination campaigns that led to a significant improvement in vaccination coverage. By 26 June 2022, seven countries have surpassed 15% of people fully vaccinated (Uganda, Sierra Leone, Cote d'Ivoire, Guinea, Ethiopia, Kenya and Zambia), including five of the countries in the Multi-Partners Country Support Teams Initiative. In these countries, the percentage of people fully vaccinated increased between the end of January 2022 and the end of June 2022, from 4.4% to 24.4% in Uganda, from 4.8% to 23.7% in Sierra Leone, from 3.5% to 31.1% in Ethiopia, from 3.5% to 16.0% in Zambia, from 9.0% to 21.0% in Cote d'Ivoire and from 9.8% to 20.1% in Guinea. In Chad, the percentage of people fully vaccinated increased from 0.7% at the end of January 2022 to 12.7% as of 26 June 2022. Figure 2 shows the percentage of people fully vaccinated at the end of January 2022 and between February and June 2022 in countries that had less than 10% of people fully vaccinated at the end of January 2022.

For global comparison, country performance has been monitored using the percentage of the general population fully vaccinated. However, an assessment of vaccine performance can also be made using the population targeted for COVID-19 vaccination by each country as per the National Deployment and Vaccination Plan for COVID-19 vaccines (NDVP), based on high-priority groups and adults aged 18 years and above. The median percentage of people fully vaccinated among the general population was 19.5% (range: 0.1%; 82%) compared to 31% (range: 31%; 93%) among target populations. Mozambique, Cape Verde and Botswana have surpassed 70% of people fully vaccinated among their target populations compared to a percentage of people

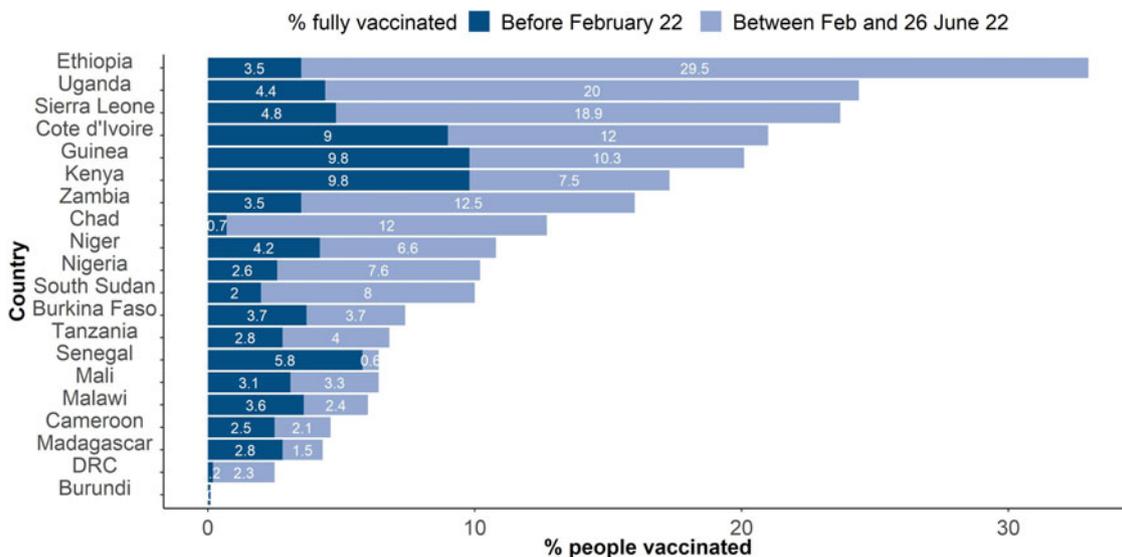


Fig. 2. Percentage of people fully vaccinated at the end January 2022 and between February and June 2022 in countries that had less than 10% of people fully vaccinated at the end of January 2022 (data as of 26 June 2022).

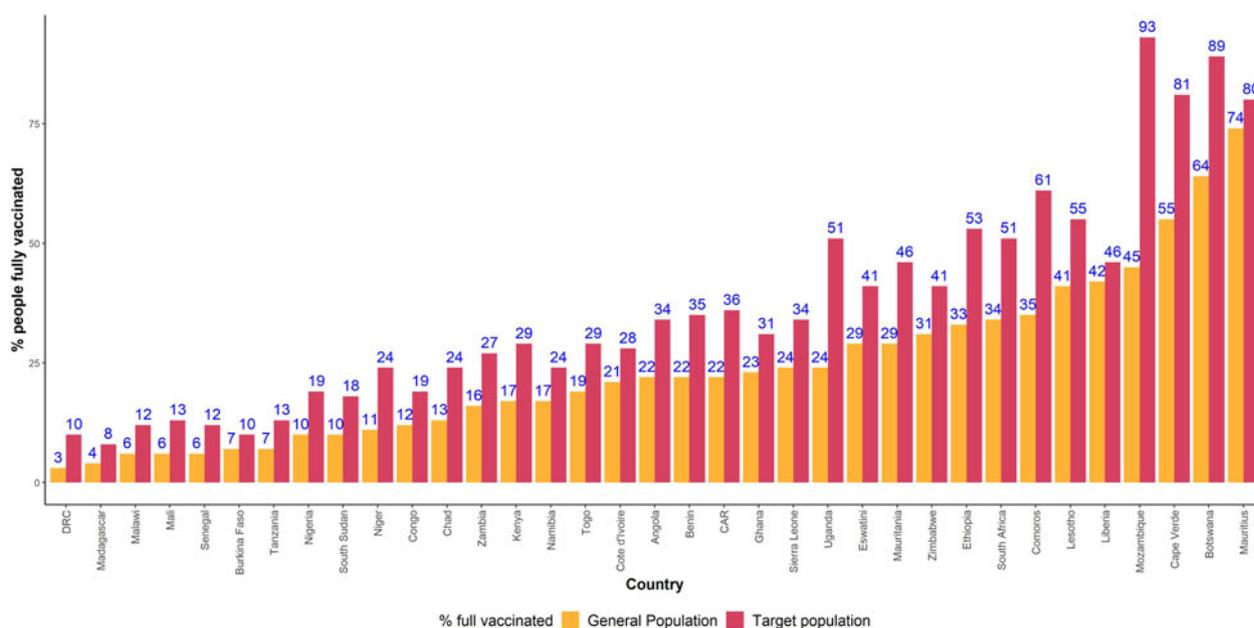


Fig. 3. Percentage of people fully vaccinated among the general population and among the population targeted for COVID-19 vaccination in 35 countries of the WHO African region (data as of 26 June 2022).

fully vaccinated in the general population of between 40% and 69% (Fig. 3).

Data on the coverage of high-priority groups in many countries in the region are either inaccurate or not available. Based on data from 26 countries, the percentage of people fully vaccinated among healthcare workers is estimated at 49.4% in the African region, ranging from 10.5% in Burundi to 88.2% in Sao Tome and Principe.

Data from 14 countries (Table 1) showed that the average percentage of people fully vaccinated among older adults was 17.3% (range: 2.4%; 63.0%) compared to 13.5% to the general population (range: 4.6%; 44.4%). Two countries (Senegal and Mali) out of 14

recorded a full coverage at least two times higher in older adults than in the general population.

The African region still has a long way to go to achieve 70% of people fully vaccinated in all countries. It is becoming clear that vaccine supply is no longer a limiting factor. [4] We need now to interrogate the reasons for low vaccine uptake across the region and find ways to overcome related challenges. Lessons learned from various countries' experiences show that drivers of low vaccine uptake in the WHO African region include [5] (i) continuous reduction of the risk perception, including among high priority groups, as a result of low case incidence since the beginning of 2022, along with decoupling of severe disease and deaths,

Table 1. Number of people fully vaccinated among the general population and among older adults in 14 countries of the WHO African region

Country	General population (A)	Age range for older adults as per NDVP	Population of older adults (B)	% of older adults in the general population C = (B/A) × 100	Number of people fully vaccinated (D)	Number of older adults fully vaccinated (E)	% of older adults among fully vaccinated F = (E/D) × 100	Ratio % older adults among fully vaccinated/% adults in the population G = F/C	% of people fully vaccinated in general population H = (D/A) × 100	% of people fully vaccinated among older adults I = (E/B) × 100	Ratio of people fully vaccinated among older adults/people fully vaccinated in general population
Benin	12 123 198	60 years +	637 431	5.3	2 690 085	179 358	6.7	1.3	22.2	28.1	1.3
Cameroon	26 545 864	50 years +	2 512 864	9.5	1 216 589	89 631	7.4	0.8	4.6	3.6	0.8
Chad	16 425 859	65 years +	424 973	2.6	2 093 522	10 249	0.5	0.2	12.7	2.4	0.2
Comoros	869 595	60 years +	46 350	5.3	301 218	6819	2.3	0.4	34.6	14.7	0.4
Ghana	31 072 945	60 years +	1 724 221	5.5	7 193 153	73 835	1	0.2	23.1	4.3	0.2
Madagascar	27 691 019	60 years +	1 445 605	5.2	1 199 011	112 072	9.3	1.8	4.3	7.8	1.8
Malawi	19 129 955	60 years +	808 042	4.2	1 139 589	92 101	8.1	1.9	5.9	11.4	1.9
Mali	20 250 834	60 years +	800 822	4.0	1 304 066	301 395	23.1	5.8	6.4	37.6	5.9
Sao Tome & Principe	219 161	60 years +	11 376	5.2	97 402	7168	7.4	1.4	44.4	63	1.4
Senegal	16 743 930	60 years +	832 868	5	1 070 503	288 131	26.9	5.4	6.4	34.6	5.4
South Sudan	11 193 729	60 years +	589 801	5.3	1 122 087	103 402	9.2	1.7	10	17.5	1.8
Togo	8 278 737	50 years +	870 455	10.5	1 557 538	215 899	13.9	1.3	18.8	24.8	1.3
Uganda	45 741 000	60 years +	1 539 999	3.4	11 144 005	699 886	6.3	1.9	24.3	45.4	1.9
Total	236 285 826		12 244 807	5.2	32 128 768	2 179 946	6.8	1.1	13.5	17.8	1.3

relaxation of public health and social measures, (ii) vaccine hesitancy, partly driven by misinformation and social media; (iii) focus on health facility centred approaches to vaccination, using only fixed sites and not sufficiently engaging communities in vaccine demand creation activities; (iv) limited political engagement and will to promote vaccination in some countries; and (v) insufficient capacity in some countries to access available funding mechanisms or to utilise funds secured, as well as demotivation of health workers.

Initial vaccine service delivery strategies focused on establishing fixed vaccination sites in health facilities, using the well-established model used to deliver childhood routine immunisation services. However, COVID-19 immunisation primarily targets adults, including those in priority-use groups. Most countries in the African region lacked experience in mass vaccination of adults and needed more time to define specific strategies for demand creation and vaccination.

Given the age structure of the population, many countries in the African region could not reach 70% of people fully vaccinated without including vaccination of adolescents and children. Noting that disease severity is much lower in these younger age groups, the benefit of vaccination is much less in these groups when compared to vaccination of older people. Based on the United Nations Population Division 2021 data [6], the median percentage of adults in the general population is 52%, ranging from 44% in Niger and 79% in Seychelles. Seychelles and Mauritius (the two countries that have achieved 70% of people fully vaccinated) have over 70% of adults aged 18 years and above in the general population. Twenty-nine countries have started vaccinating adolescents. As of 26 June 2022, doses administered to children accounted for 7.4% of all doses administered. Adults aged 18 years and above continue to account for the majority of people vaccinated in the African region.

Most countries in the region started to rollout COVID-19 vaccination in the middle of the third wave, driven by the Delta variant, which started in early May 2021 and peaked in July 2021, leading to increased vaccine demand at a time when vaccine supply was constrained, making it difficult to address this demand.

We need to build on the progress that has been made across the region, but there are challenges. The perception that COVID-19 is not a severe disease has led to COVID-19 complacency in many communities and in turn to a decreased demand for vaccines. More research needs to be undertaken to better describe the epidemiology of COVID-19 in the African region, so that ongoing advocacy for vaccine use can be based on an understanding of local epidemiology. With only two countries having surpassed 70% of people fully vaccinated, the African region continues to lag behind other regions in terms of immunisation coverage. Numerous surveys undertaken in the region have shown high seropositivity rates caused by a combination of natural infection and immunisation. What is not known is the durability of protection offered by hybrid immunity and also how effective this type of population immunity will be in the event of the emergence of new variants of concern. Leaders in the region need to work to ensure that Africa is not left behind as the world strives towards controlling the COVID-19 pandemic. Accordingly, the beginning of the second semester of 2022, should be seen as a window of opportunity to provide new impetus to the COVID-19 vaccination rollout in the African region. In line with the WHO Strategy Advisory Groups of Experts on Immunization (SAGE) roadmap for prioritising use of COVID-19 vaccines [7], Member States with low vaccination

coverage should adjust their delivery strategies to vaccinate, as soon as possible, most people in high priority-use groups in all countries of the WHO African region. The new impetus to COVID-19 vaccination rollout should be guided by four principles: Scale-up, Transition and Consolidation.

- **Scale-up:** ongoing governments' efforts to scale up COVID-19 vaccination should continue with the aim of vaccinating the majority of adults in order to vaccinate most people among high priority-use groups by of mid-2023. WHO AFRO urges all Member States to comply with the WHO SAGE roadmap for countries with low coverage. This means focusing first on vaccinating high priority-use groups (healthcare workers, older adults, people who are immunocompromised or have comorbidities, refugees and internally displaced people). Attendance at fixed vaccination sites is dropping in most countries, and WHO AFRO recommends using the Provider Initiated COVID-19 Vaccination approach in health facilities, leveraging experience from HIV programmes on access to testing [8]. It is critical to continue taking vaccination services to the population with the use of mobile and outreach teams and a community-centred approach in demand creation and provision of vaccination services. WHO AFRO urges partners to continue providing technical and financial support to Member States.
- **Transition:** Member States should prioritise integrating COVID-19 vaccination services into routine care for those living with HIV, tuberculosis, cancer, diabetes and other non-communicable diseases, as well as into home care services and housing for seniors. Such integration will ensure that people with comorbidities and older adults will continue to have access to COVID-19 vaccines according to updated policies and guidelines around primary series, booster doses and third doses.
- **Consolidation:** It is critical to leverage progress made in COVID-19 vaccination data management to strengthen data management for routine immunisation, vaccine-preventable diseases surveillance and disease control in general, as well as applying progress on COVID-19 vaccination digital certificates to all vaccines required for international travel.
- **Communication:** Noting the challenge of poor demand, countries should develop strategies that promote vaccine uptake in different target populations. Communication should be offered by appropriate leaders or role models with messages that resonate with different age groups and cultures.

In spite of the late arrival of COVID-19 vaccines on the African region, followed by massively unequal supply, many countries have overcome the initial challenges and achieved at least some level of COVID-19 vaccination coverage, especially based on the target population. To contribute to global efforts in preventing the emergence of new variants of concern and ending the acute phase of the pandemic, it is critical for African countries to concentrate efforts to vaccinate a very high proportion of people in the high priority-use groups. We need to build on the progress made in the first six months of 2022 to ensure that the African region is not left behind in efforts to control the COVID-19 pandemic, as economies open up and world priorities change.

Data. The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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