COVID-19 VACCINATION IN THE WHO AFRICAN REGION

MONTHLY BULLETIN

NOVEMBER 2022

DATE OF ISSUE: 10 DECEMBER 2022
DATA AS REPORTED BY 4 DECEMBER 2022
ISSUE NO. 10
## AT A GLANCE

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doses received from the COVAX facility</td>
<td>67%</td>
</tr>
<tr>
<td>Expired doses of all doses received</td>
<td>3.0%</td>
</tr>
<tr>
<td>Countries that have administered fewer than 50% of doses received</td>
<td>12</td>
</tr>
<tr>
<td>Doses administered of all doses received</td>
<td>70%</td>
</tr>
<tr>
<td>Countries that have already reported expired doses</td>
<td>35</td>
</tr>
<tr>
<td>Decrease in doses administered in November 2022 compared to October 2022</td>
<td>44%</td>
</tr>
<tr>
<td>Region’s population that has completed the primary series</td>
<td>24.9%</td>
</tr>
<tr>
<td>Countries that have achieved the target of 70% of their population completing the primary series</td>
<td>3</td>
</tr>
<tr>
<td>Countries yet to surpass 10% of their population with the complete primary series</td>
<td>4</td>
</tr>
<tr>
<td>Countries that have vaccinated between 40% and 69% of their population with the complete primary series</td>
<td>11</td>
</tr>
</tbody>
</table>
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As of 4 December 2022, a total of 291 million people in the African Region had completed the primary COVID-19 vaccination series, representing 24.9% of the Region’s population. Three countries have surpassed the target of 70% of their population having completed the primary series: Mauritius (86.0%), Liberia (78.9%) and Seychelles (76.7%). One country (Rwanda) is close to this target with 69.4% of people having completed the primary series. Ten other countries have reached targets of between 40% and 70% of people who have completed the primary series: Sierra Leone (40.1%), Eswatini (42.3%), Zambia (44.3%), Lesotho (44.6%), United Republic of Tanzania (44.8%), Sao Tome and Principe (47.3%), Comoros (48.4%), Mozambique (56.1%), Botswana (57.8%) and Cabo Verde (62.8%). Four countries are yet to achieve 10% of people with complete primary series: Burundi (0.2%), Democratic Republic of the Congo (4.7%), Madagascar (6.6%) and Senegal (7.6%). Cameroon and Mali surpassed 10% of people with complete the primary series in November 2022.

Booster doses are being administered to people with complete primary series in 37 out of 46 countries in the African Region (80%). Thirty-six of them have submitted reports on booster shots to WHO/AFRO. Benin is still the only country with no data on booster doses available at national level. In the 36 countries that submitted reports to WHO/AFRO, 14.8% of people who have completed the primary series have received at least one booster dose.

Data from 29 countries indicate that 40.7% of health workers while 36.8% of older adults have completed the primary series in 23 countries.

A total of 729 million doses of COVID-19 vaccines have been received in the African Region, including 66.7% from the COVAX Facility. This represents 62.4 doses per 100 population. Of the doses received, 70% has been administered. Twelve out of 46 countries (26%) have administered fewer than 50% of doses received. The number of doses administered decreased by 44% in November 2022 compared to October 2022 (the doses had increased by 63% in October 2022 compared to September 2022). On average, 4.9 million doses were administered per week in November 2022, compared to 8.8 million per week in October 2022.

Mozambique (13.2%), Central African Republic (5.7%) and Cameroon 5.4%), recorded the highest percentage of people who completed the primary series in November 2022 among countries that have not yet achieved 70% of people with the complete primary series. Cameroon and the Central African Republic implemented mass vaccination campaigns in November 2022, while
Mozambique implemented a vaccination campaign targeting adolescents aged 12–17 years.

Thirty-five out of 46 countries have reported expiry of vaccines. The number of expired doses accounts for 4.5% of doses received in the 35 countries and 3.0% of doses received in the African Region. Algeria (28.6%), Senegal (25.4%), Madagascar (22.2%), Congo (21.8%) and Benin (13.8%) recorded the highest percentage of expired doses in relation to those received.

WHO AFRO continued to implement the Multi-Partner Country Support Team (MP-CST) initiative in the month under review, with a focus on the 14 priority countries. In November 2022, 14 additional consultants were recruited and deployed, bringing the total number of consultants deployed through the MP-CST initiative to 95. In November 2022, WHO deployed its COVID-19 Campaign Surge Support team in Cameroon to provide support for the planning and implementation of the Fifth nationwide COVID-19 mass vaccination campaign which took place from 18 to 27 November 2022.

This issue of the Bulletin shares lessons from Cameroon in using an adaptive community engagement and communication strategy for effective demand generation during a COVID-19 mass vaccination campaign. The experience of the support provided by the Clinton Health Access Initiative (CHAI) to Nigeria in rolling out COVID-19 vaccination is also discussed.

The WHO technical document on “Good practice statement on the use of variant-containing COVID-19 vaccines” is summarized in this issue.
1. COVID-19 VACCINATION SITUATION UPDATE

1.1. VACCINES RECEIVED

As of 4 December 2022, a cumulative total of 729,051,062 doses of COVID-19 vaccines had been received in 46 of the 47 Member States of the WHO African Region (WHO/AFRO). Eritrea is still the only country that has not started vaccinating against COVID-19. Of the doses received, 486 million (66.7%) were from COVAX, 161 million (22.1%) from bilateral cooperation arrangements, 65 million (8.9%) from the African Vaccine Acquisition Trust (AVAT), 7.7 million (1.1%) purchased by governments, and 9.2 million (1.2%) from unspecified sources (Figure 1).

Johnson & Johnson, Pfizer/BioNtech, Sinopharm and Oxford/AstraZeneca account for 33.7%, 19.0%, 14.0% and 12.3% of vaccines received in the Region, respectively. Table 1 shows the distribution of doses received in the WHO African Region as of 4 December 2022 by type of vaccine.

Of the doses received, 486 million (66.7%) were from COVAX, 161 million (22.1%) from bilateral cooperation arrangements, 65 million (8.9%) from the African Vaccine Acquisition Trust (AVAT), 7.7 million (1.1%) purchased by governments, and 9.2 million (1.2%) from unspecified sources.
On average, 62.4 doses have been received per 100 population. Eight countries have received over 140 doses per 100 population (two doses for 70% of the population): Comoros, Sao Tome and Principe, Mauritius, Rwanda, Seychelles, Liberia, Mauritania and Cabo Verde. Burundi (6.2 doses per 100 population), Democratic Republic of the Congo (12.1 doses per 100 population), and Cameroon (20.7 doses per 100 population) have received the lowest number of doses per 100 population.

Table 1. Cumulative doses of vaccines received as of 4 December 2022 by type of vaccine

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>Doses received</th>
<th>% doses received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson &amp; Johnson</td>
<td>245,521,885</td>
<td>33.7</td>
</tr>
<tr>
<td>Pfizer/BioNtech</td>
<td>138,885,442</td>
<td>19.0</td>
</tr>
<tr>
<td>Sinopharm</td>
<td>102,175,159</td>
<td>14.0</td>
</tr>
<tr>
<td>Oxford/Astrazeneca</td>
<td>89,796,080</td>
<td>12.3</td>
</tr>
<tr>
<td>Sinovac</td>
<td>49,947,400</td>
<td>6.8</td>
</tr>
<tr>
<td>Moderna</td>
<td>38,283,180</td>
<td>5.3</td>
</tr>
<tr>
<td>Covishield</td>
<td>25,882,940</td>
<td>3.5</td>
</tr>
<tr>
<td>Sputnik V/Light</td>
<td>1,907,450</td>
<td>0.3</td>
</tr>
<tr>
<td>Covaxin</td>
<td>365,000</td>
<td>0.1</td>
</tr>
<tr>
<td>Unspecified</td>
<td>36,286,526</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>729,051,062</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
1.2. EXPIRED DOSES

The cumulative number of expired doses had slightly increased from 17,697,775 at the end of October 2022 to 21,778,859 as of 4 December 2022 (23% increase). Of the expired doses, 17,564,140 have not yet been destroyed (80.6% of all expired doses). Thirty-five out of 46 countries have reported expiry of vaccines. The number of expired doses accounts for 4.5% of doses received in the 35 countries and 3.0% of doses received in the African Region. Algeria (28.6%), Senegal (25.4%), Madagascar (22.2%), Congo (21.8%) and Benin (13.8%) recorded the highest percentage of expired doses in relation to those received (Figure 2).

1.3. COVID-19 VACCINES ADMINISTERED

Of the 729 million doses received, 510,613,197 have been administered, representing 70.0% of doses received. Administered doses as a percentage of all doses received ranged from 3.7% in Burundi to 95.7% in the United Republic of Tanzania (Figure 3). Twelve out of 46 countries (26%) have administered fewer than 50% of doses received (14 countries at end-October 2022).
Figure 4 presents the distribution of doses administered in the African Region by month of reporting as of 4 December 2022. The number of doses administered decreased by 44% in November 2022 compared to October 2022 (the doses had increased by 63% in October 2022 compared to September 2022). On average, 4.9 million doses were administered per week in November 2022, compared to 8.8 million per week in October 2022.

Vaccine doses administered to children and adolescents

Twenty-six countries in the African Region have reported doses administered to children aged 12 to 17 years. In these countries, cumulative doses administered to children and adolescents account for 8.8% of all doses administered (Table 2).
1.4. GENERAL POPULATION COVERAGE

As of 4 December 2022, a total of 355.8 million people had received at least one dose of the COVID-19 vaccine, representing 30.4% of the African Region’s population (29.2% at the end of October 2022), while 291 million people had received the required number of vaccine doses in the primary series, representing 24.9% of the Region’s population (23.4% at the end of October 2022). Globally, 63% of the population had completed the primary series as of 4 December 2022.

Figure 5 shows the evolution over time of the percentage of people vaccinated with at least one dose of COVID-19 vaccine and people who have completed the primary series, by reporting month in the African Region.
Figure 6 presents the percentage of people who have completed the primary series by country. Three countries have surpassed the target of 70% of their population having completed the primary series: Mauritius (86.0%), Liberia (78.9%) and Seychelles (76.7%). One country (Rwanda) is close to this target with 69.4% of people having completed the primary series. Ten other countries have reached targets of between 40% and 70% of people who have completed the primary series: Sierra Leone (40.1%), Eswatini (42.3%), Zambia (44.3%), Lesotho (44.6%), United Republic of Tanzania (44.8%), Sao Tome and Principe (47.3%), Comoros (48.4%), Mozambique (56.1%), Botswana (57.8%) and Cabo Verde (62.8%).

Twenty-eight countries have recorded performances of between 10% and 40% of their population completing the primary series (24 countries at end-October 2022). Four countries are yet achieve 10% of people with complete primary series: Burundi (0.2%), Democratic Republic of the Congo (4.7%), Madagascar (6.6%) and Senegal (7.6%). Cameroon and Mali surpassed 10% of people with complete primary series in November 2022.
Figure 7 shows the geographical distribution of the percentage of the population who have completed the primary series by country in the African Region.
Figure 8 shows the percentage of people who completed the primary series at the end of October and in November 2022 in the 27 countries that had less than 30% of people with complete primary series at the end of October 2022.

Figure 9 shows the percentage of people who completed the primary series at the end of October and in November 2022 in the 19 countries that had more than 30% of people with complete primary series at the end of October 2022.
Mozambique (13.2%), Central African Republic (5.7%) and Cameroon (5.4%) recorded the highest percentage of people who completed the primary series in November 2022 among countries that have not yet achieved 70% of people with complete primary series.

**Mozambique** carried out a mass vaccination campaign from 10 to 25 November 2022 targeting adolescents aged 12–17 years.

**The Central African Republic** carried out a seven-day nationwide mass vaccination campaign against tetanus and COVID-19, from 7 to 13 November 2022, which led to an increase of people with the complete primary series from 1,501,509 at end-October 2022 to 1,813,391 as of 4 December 2022, representing a 21% increase.

**Cameroon** implemented a 10-day nationwide mass vaccination campaign, from 18 to 27 November 2022. A total of 2,004,385 vaccine doses were administered during the campaign, representing 50% of all doses administered since the country started rolling out COVID-19 vaccination. The percentage of people with complete primary series increased from 4.6% at end-October 2022 to 10.0% as of 4 December 2022.

**Booster** doses are being administered to people with complete primary series people in 37 out of 46 countries in the African Region (80%), including 36 that submitted reports on booster shots to WHO/AFRO; Benin is still the only country with no data on booster doses available at national level. In the 36 countries that submitted reports to WHO/AFRO, 14.8% of people with the complete primary series have received at least one booster dose. Figure 10 presents the distribution of the proportion of people who had completed the primary series and received booster doses in the African Region as of 4 December 2022.

![Figure 10. Proportion of people with complete primary series people who have received booster doses in 35 countries in the African Region (data as of 4 December 2022)](image)
1.5. COVERAGE IN HIGH PRIORITY GROUPS

Health workers and older adults will be used in this issue as a tracer for all high priority groups. Data on these two groups have been cleaned and countries that did not report consistently were excluded.

Twenty-nine countries have reported data on the number of health workers who have completed the primary series. In these 29 countries, 40.7% of health workers have completed the primary series, ranging from 10.8% in Burundi to 99.4% in Rwanda (Figure 11).

Figure 11: Proportion of health workers who have completed the primary vaccination series against COVID-19 in 30 countries in the African Region (data as of 4 December 2022)

Twenty-three countries have reported data on the number of older adults who have completed the primary series. In these 23 countries, 36.8% of older adults have completed the primary series, ranging from 2.1% in Ghana to 88.7% in Senegal (Figure 12).
Low coverage in Ghana, Madagascar, the DRC and Comoros may result from under-reporting due to suboptimal data collection systems or over-estimation of the population size of older adults.
2. WHO/AFRO OPERATIONS UPDATE

Country Support Team initiative

In November 2022, WHO AFRO continued to implement the Multi-Partner Country Support Team (MP-CST) initiative with a focus on the 14 priority countries. The rationale is to augment human resource capacity for the implementation of COVID-19 vaccination activities and the delivery of essential routine services. Through this initiative, consultants with expertise in immunization, demand generation, data management, logistics and waste management and health financing have been recruited and deployed to countries to support COVID-19 vaccination. In November 2022, 14 additional consultants were recruited and deployed, bringing the total number of consultants deployed through the MP-CST initiative to 95; of this figure, 77 were recruited by WHO AFRO and 18 were STOPpers. Most of the consultants (52) have been deployed in priority countries. Efforts are being made to recruit additional consultants under the CST, especially as countries continue to battle multiple outbreaks of vaccine-preventable diseases.

The Vaccine Pillar continued to review country performance and engaged countries through the African COVID-19 Readiness and Deployment Team (ACREDT) platform.

COVID-19 campaign surge support

In November 2022, WHO deployed its COVID-19 Campaign Surge Support team to Cameroon to provide support in planning and implementing the fifth nationwide COVID-19 mass vaccination campaign, which took place from 18 to 27 November 2022. Twenty-two experts were deployed, including nine immunization officers, two epidemiologists, three demand generation officers, two logisticians, three data managers, one finance officer and two administrative/human resource experts, from 10 to 28 November 2022. The team provided support in setting up regular coordination meetings with Cameroon’s EPI before, during and after the campaign. WHO AFRO support included microplanning of the campaign, training of vaccination teams and supervisors at all levels, demand creation activities focusing on community engagement, supervision, and data management and use for decision-making.

To support demand creation, the mission worked with the in-country communication subcommittee of the Campaign Planning Committee to develop and disseminate key messages and best practices on demand generation and community mobilization. The team coordinated the development and dissemination of campaign messages across

1 Burkina Faso, Gambia, Senegal, Niger, Nigeria, Cameroon, Chad, Democratic Republic of the Congo, Burundi, United Republic of Tanzania, South Sudan, Malawi, Madagascar, and Mali.
social media platforms (Facebook, Instagram, Twitter, WhatsApp, etc.). Engagement meetings were held with media influencers and traditional media personalities to create visibility for the campaign. Innovations were also introduced, including the printing and distribution of T-shirts and notepads, among other articles, to vaccinees. Caravans were used to organize roadshows with testimonials by opinion leaders and peer influencers, which drew people to the vans to receive the vaccine.

The surge mission supported the development of a campaign monitoring dashboard and shared daily reports with national authorities and partners to enable them track performance. Briefing sessions (in-person and remote) were held for data managers in regions, districts, and facilities. Capacity was built for the Expanded Programme on Immunization (EPI) data management team in the use of PowerBI.

The mission supported the country team in establishing systems to monitor vaccine quality, stock level and the cold chain in regions, districts, and facilities. The team supported, upon the request of the Ministry of Public Health, the mobilization of 200 000 additional doses from Chad, as well as the fast-track destruction of expired doses.

High-level mission of the COVID-19 Vaccine Delivery Partnership (COVDP)

In November 2022, the COVDP embarked on high-level missions to Niger and Cameroon. Below is a summary of the report of the mission to Niger. The report of the Cameroon mission, which is currently being developed, will be shared in the December 2022 Bulletin.

The mission to Niger took place from 1 to 3 November 2022 and was led by Ted Chaiban, the Global Lead Coordinator for COVID-19 Vaccine Delivery. The objectives of the mission were to (i) engage in joint political advocacy at the highest level with the Government, the diplomatic corps and technical and financial partners to ensure that the response to COVID-19 remains a top priority for Niger; (ii) introduce the Global Partnership for COVID-19 Vaccine Delivery to country stakeholders in Niger; (iii) take stock of the progress of the roll-out of the COVID-19 vaccination programme in Niger, obtain clarification on the main bottlenecks to the scale-up of the programme and identify solutions and entry points to address them; (iv) advocate for increased commitment and better coordination at the regional and operational levels for the roll-out of COVID-19 vaccination.

The following were the key next steps and action points:

**For the Ministry of Health (Government):**

- Increase the share of the state budget allocated to the health sector.
- Strengthen coordination between bilateral partners and the country team to enhance their contribution to Niger’s new economic and social development plan.
- Develop and implement a booster policy for priority populations – especially for priority groups such as health care workers and persons aged over 60 years.
- Further mobilize the various ministries, notably Interior, Defence and Education, as well as the Governors Health Directors of Regions, to strengthen of interventions at the subnational level.
- Include the monitoring of COVID-19 vaccination indicators in the agenda of coordination meetings between the eight regions and the Secretary-General of the Ministry of Health.

**For the Directorate of Immunization**

- Organize two additional campaigns, including one in December 2022. During these campaigns, target all high priority groups such as health care workers and persons...
aged above 60 years); vulnerable groups such as refugees, displaced persons and nomadic groups; and remote populations – notably by getting mobile teams to some of the more remote areas in Niger.

- Systematize post-campaign reviews and present results within 20 days.
- Conduct a comprehensive review of the 2022 COVID-19 vaccination campaigns to draw lessons and best practices so as to optimize the 2023 campaigns and better integrate them into the Ministry of Health’s programming.
- Establish a mechanism for daily monitoring of district performance during immunization campaigns and conduct in-process and end-process monitoring.
- Organize cross-border coordination meetings with border district authorities, involving the Ministry of Livestock, the United Nations High Commissioner for Refugees, the United Nations Office for the Coordination of Humanitarian Affairs and the International Organization for Migration, among others.
- Update the data on destroyed vaccine doses in the WHO AFRO platform.
- Plan, within three to six months, to evaluate the performance of the high-volume vaccination site (vaccinodrome) to demonstrate its effectiveness in the profile of proximity vaccination before going to scale.

For Niger’s partners

- Provide technical and financial support for the eighth vaccination campaign as well as campaign monitoring and reviews.
- Use the results of the latest knowledge, attitudes and practices (KAP) survey on COVID-19 vaccination, conducted in October 2022 to further target risk communication and community engagement intervention areas.
- Follow up on the implementation of the immunization data improvement plan – established following the WHO AFRO mission – and share the results by the communicated date of 15 December 2022.

For the CoVDP

- Provide support to fill the financial gaps for (i) the eighth campaign in December 2022; (ii) the activities scheduled for the beginning of 2023 (prior to the receipt of the third funding window of the COVID-19 Vaccine Delivery Support); and (iii) the humanitarian campaigns.
- Strengthen advocacy for (i) the provision of vaccines that are adapted to country needs and have a long shelf life; (ii) more flexible funding to strengthen the public health system.
- Share global best practices such as vaccination strategies for priority groups and vulnerable populations.

One of the objectives of the CoVDP mission in Niger was to engage in joint political advocacy at the highest level with the Government, the diplomatic corps and technical and financial partners to ensure that the response to COVID-19 remains a top priority for Niger.
Cameroon was one of the five African countries that still had less than 10% of its population that had completed the primary vaccination series as of mid-November 2022. The Government of Cameroon, with support from partners, planned and implemented a 10-day nationwide mass vaccination campaign from 18 to 27 November 2022 for a much-needed push to surpass 10% of its population with the complete primary series. The goal of the campaign was to vaccinate at least 3 million people, despite having only an estimated 2.4 million vaccine doses available in the country before the start of the campaign. An additional 200,000 doses were sourced from neighbouring Chad to address the gap. The Ministry of Health of Cameroon led the weeks of planning and preparation with full support from partners, including the mobilization of US$ 4.9 million needed for the campaign from the WHO Regional Office for Africa (WHO AFRO) through the COVID-19 Vaccine Delivery Partnership, and US$ 700,000 from USAID. WHO AFRO also deployed a 22-member surge team with varied expertise to support the WHO Country Office and Ministry of health in preparing for and implementing the vaccination campaign at subnational level.

A pre-campaign rapid assessment of behavioural and social drivers of COVID-19 vaccination in Douala, Cameroon was conducted from 7 to 11 November by the Ministry of Health with support from the WHO AFRO Risk Communications and Community Engagement (RCCE) surge team. Quantitative assessments of the
behavioural and social drivers of vaccination were conducted in 36 communities across Douala. A total of 2651 participants from 968 households participated in the survey. In addition, in-depth interviews were conducted with 27 religious leaders and 42 focus group discussions (with 420 members of the community) were held. Preliminary findings from the rapid assessment showed: (i) the persistence of misinformation about COVID-19 and COVID-19 vaccination in the communities; (ii) lack of awareness and sensitization of communities on available vaccines, their effectiveness and safety; (iii) social media as the main source of information about COVID-19; (iv) great trust by communities in actors from the same community (chiefs, health workers, community mobilizers); (v) that the population as a whole believes in the importance of vaccines in general to promote health.

Advocacy and communication activities also started before the campaign. At the national level, key influencers/opinion leaders including religious and traditional leaders and media personalities had been engaged and oriented on COVID-19 vaccination. At the subnational level, communities were sensitized by community mobilizers who visited homesteads and disseminated information about COVID-19 vaccination and the campaign. COVID-19 vaccination messages were also disseminated through traditional media.

The national campaign was launched on 18 November 2022 by the Honorable Minister of Health in Yaoundé, the capital city of Cameroon.

The game changer for the campaign was pro-active implementation of a comprehensive adaptive mobilization plan. Building on the existing strategy that mainly relied on the pre-campaign mobilization by community mobilizers and traditional media, more activities were added to target and reach more subpopulations with appropriate messages. From the daily coordination meetings held with the EPI, regional teams and partners to review progress, it emerged that there was still low sensitization and awareness about COVID-19 vaccination in the communities despite the activities implemented before the start of the campaign. Missed opportunities were identified in engaging and vaccinating people in gatherings such as places of worship, markets, and institutions of higher learning, among others. The targeted populations were also not going to fixed sites and outreach posts for vaccination. There was need to adapt the communication and mobilization strategy to include demand generation activities targeting specific groups, communities, and locations and linking it to service provision.

The following activities were quickly adopted into the mobilization strategy: (i) door-to-door mobilization and vaccination by mobile teams, where the teams visited homes, markets, bars, places of worship and work, universities and other learning institutions; (ii) use of caravans to attract crowds and broadcast messages on COVID-19 vaccination in the two highly populated cities of Yaoundé and Douala; (iii) advocacy meetings held with key influencers and opinion leaders such as religious and traditional leaders, traditional healers, media personalities, and local and peer leaders such as market heads and student leaders to provide people with information to mobilize their respective communities. For instance, 11 pastors from the Anglican churches in Yaoundé invited the vaccination teams to their respective churches and provided platforms for the teams to disseminate information on COVID-19 vaccination, followed by vaccination of the faithful after prayers. After a listening and interviewing session, 15 traditional practitioners committed themselves to promoting the vaccination they had been criticizing in the presence of their patients and the general population. They explained that the vaccine was not incompatible with traditional medicine. Among Muslims, 25 imams were hired after listening and dialogue sessions on vaccines. The same was done with 15 traditional chiefs in the city of Yaoundé and its surroundings. WhatsApp groups were created for each category. These groups now function as networks that can serve as a bridge between communities, the Ministry of health and WHO.
COVID-19 VACCINATION IN THE WHO AFRICAN REGION

Members of the WHO AFRO Surge team and Cameroon MoH led by Dr Phionah Atuhebwe, the COVID-19 IMST vaccine pillar lead, sensitizing a congregation at a Presbyterian church in Yaoundé.

A mobile vaccination team in Yaounde vaccinating people returning home after work.
As a result of this campaign, 2,004,385 vaccine doses including 341,415 booster doses were administered, compared to 300,000 doses administered in the previous campaign held in March 2022. Figure 13 presents the distribution of doses administered per month in Cameroon.

A total of 1,255,629 people completed the primary series and 1,413,926 people received at least one dose during the campaign. Cumulatively, 10.0% of the total population (2,782,035 people out of a population of 27,795,843) had completed the primary series as of 4 December 2022 from 4.7% before the start of the campaign.

Table 3 presents the distribution or number of people vaccinated by region.

<table>
<thead>
<tr>
<th>Region</th>
<th>Target population</th>
<th># Vaccinated with at least one dose</th>
<th># With complete primary series</th>
<th>% Vaccinated with at least one dose</th>
<th>% With complete primary series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adamaoa</td>
<td>164,370</td>
<td>89,583</td>
<td>80,636</td>
<td>54.5</td>
<td>49.1</td>
</tr>
<tr>
<td>Centre</td>
<td>560,011</td>
<td>220,935</td>
<td>178,730</td>
<td>39.5</td>
<td>31.9</td>
</tr>
<tr>
<td>East</td>
<td>150,285</td>
<td>100,908</td>
<td>92,582</td>
<td>67.1</td>
<td>61.6</td>
</tr>
<tr>
<td>Far North</td>
<td>550,875</td>
<td>422,525</td>
<td>404,712</td>
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<td>Littoral</td>
<td>472,447</td>
<td>119,819</td>
<td>100,646</td>
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<td>21.3</td>
</tr>
<tr>
<td>North</td>
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<td>199,711</td>
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<td>49.9</td>
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<td><strong>3,000,000</strong></td>
<td><strong>1,413,926</strong></td>
<td><strong>1,255,629</strong></td>
<td><strong>47.1</strong></td>
<td><strong>41.9</strong></td>
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</table>
The percentage of people having completed the primary series increased from 4.6% at end-October 2022 to 10.0% as of 4 December 2022, as a result of the Fifth mass vaccination campaign (Figure 14).

Overall strengths that underpinned the adaptive RCCE strategy.

- All required funds for the campaign were available before the start of the campaign.
- There was strong commitment from teams at national, regional and health facility levels.
- The number of vaccinating teams had increased from about 1900 to more than 6000.
- Subnational deployment of national supervisors ahead of the campaign ensured better preparedness ahead of the campaign.
- Availability of various implementing partners at the operational level.
- Willingness of various leaders and CSOs to provide support for COVID-19 vaccination despite the misinformation.

Development and deployment of a campaign dashboard with daily updates from the situation report.

Adequate vaccine stock levels and the cold chain for mobile teams at subnational level.

Innovations to reach target groups, such as vaccinating in bars and vaccinating in the late evening when people return home.

Weaknesses/Challenges

The successful campaign did not come without a few challenges. Below are some of the challenges that were noted:

- Inadequate microplanning which led to ad hoc planning and redesigning RCCE vaccination strategy and activities (for instance, engaging market leaders and vaccinating in markets, churches and other mass gatherings, use of caravans).
Some community mobilizers did not have adequate information about COVID-19 vaccination for effective interpersonal communication and mobilization.

- Delayed reporting by some vaccination teams and data discrepancies in the Excel tool used to monitor campaign outputs and the DHIS2.

- Delayed payment of facilitation to civil society organizations, mobilizers, and vaccination teams for the previous campaigns.

- Ineffective use of social media platforms to disseminate information and engage followers; yet the rapid assessment of behavioural and social drivers of COVID-19 vaccination indicated that communities get the most information on COVID-19 vaccination from social media.

Way forward

- Despite achieving 10% coverage for the complete primary series in the general population and 71% for health workers, Cameroon is still far from achieving the desired 70% global target and 100% coverage among the highest priority groups. Efforts to move towards the global target will not end with the campaign and strategies will be put in place to ride on the garnered momentum and awareness to increase the coverage further. More effort and clearer strategies are needed to reach the unvaccinated health workers, older adults, and people with comorbidities.
The Clinton Health Access Initiate (CHAI) country office in Nigeria has provided technical assistance and support through partnerships to the Government of Nigeria since 2007. This support includes accelerating the introduction of new vaccines (COVID-19, rotavirus and human papilloma) and strengthening equitable access to lifesaving health commodities in Nigeria. Highlighted below are some key areas of the support provided to the National Primary Health Care Development Agency (NPHCDA) through the COVID-19 Strategic Technical Working Group (TWG) in the deployment of COVID-19 vaccines, which expands support in four States (Kano, Lagos, Niger and Yobe) at the subnational level.

Support for COVID-19 vaccine selection and approval in Nigeria

As part of pre-planning for the roll-out of the COVID-19 vaccine in Nigeria, CHAI provided technical and strategic support to the Nigeria Immunization Technical Advisory Group (NGI-TAG) to review 11 COVID-19 vaccine products to inform the Government’s decision on which vaccine products were suitable for containing and controlling onward transmission of COVID-19 in Nigeria. CHAI supported the planning and coordination of NGI-TAG meetings, gathered scientific evidence from the rapidly developing literature on vaccine safety, efficacy, and effectiveness, and conducted analyses on cold chain requirements for storage and distribution of the various COVID-19 vaccines.

After a systematic literature review of the available evidence and guidance from the World Health Organization (WHO), the NGI-TAG recommended the Pfizer messenger RNA (mRNA) vaccine as the vaccine of choice for the pharmacological response, control and prevention of COVID-19 transmission in Nigeria. However, given the limited global supply and constraints at the time, the NGI-TAG also recommended that Moderna mRNA, Oxford/AstraZeneca, and the Johnson & Johnson vaccines be introduced concurrently to rapidly reduce severity and transmission of the disease in Nigeria. CHAI’s support was instrumental in defining NGI-TAG’s approach to decision-making on COVID-19 products.

COVID-19 vaccination was rolled out in March 2021, and to date, Nigeria has received nearly 127 million doses of different COVID-19 vaccines through the Federal Government and the COVAX Facility.
COVID-19 vaccination service delivery at the national and subnational level

With financial support from the Bill & Melinda Gates Foundation and Gavi, the Vaccine Alliance, CHAI’s technical support to the Government of Nigeria included technical assistance in support of the roll-out of COVID-19 vaccinations at the national and subnational level in four focus States: Kano, Lagos, Niger, and Yobe. The specific objectives of CHAI’s technical assistance included support to:

- successfully vaccinate a high proportion of prioritized and at-risk populations (health care workers, front-line workers, persons aged 50 years and above, and persons living with comorbidities) with available vaccines by the end of December 2022;
- develop a clearly defined medium- to long-term COVID-19 strategy based on the epidemiological profile of the virus, global guidance, and best practices on containment strategies for COVID-19.

As a strategic thought partner of the Nigeria COVID-19 strategic technical group, CHAI gathered and synthesized evidence from implementing States to inform the national prioritization and targeting of priority groups for the vaccine roll-out. In addition, CHAI instituted a continuous feedback response mechanism through regular evening review meetings with the supported States to collate real-time roll-out implementation challenges and escalate these through the working group to identify solutions to implementation bottlenecks.

CHAI, along with other partners, continues to generate evidence from COVID-19 vaccination monitoring and evaluation to inform medium- to long-term strategies for subsequent COVID-19 vaccination programming and opportunities for integration into routine immunization. Since its first reported case, Nigeria has evolved its COVID-19 strategies from exploring the traditional routine immunization process anchored on the fixed-site vaccination approach (TEACH² strategy), to decentralizing vaccine access, a family-centred outreach approach (PSI-COVID³) and its current delivery strategy anchored on an integrated model for COVID-19 vaccinations (SCALES⁴ versions 1, 2 and 3). Through various approaches, these service delivery strategies led to an increase in the number of vaccinations from 2,325,093 in the second quarter of 2021 to 25,077,502 in the third quarter of 2022.

Specific activities conducted at the State/National level that informed the technical assistance provided to the TWG.

Planning and coordination

- Through the strategic group, CHAI has provided technical assistance to the Government of Nigeria, leveraging evidence from the COVID-19 vaccination monitoring, and evaluation feedback in the early phases of vaccine roll-out to inform medium- to long-term strategies for subsequent COVID-19 vaccination delivery strategies and a routinization framework/roadmap.
- At the subnational level, CHAI supported coordination and planning of weekly review meetings with the State technical teams and data control room. The action points from the review meetings helped in the monitoring of activity status and developing context-specific interventions.

Logistics

- In CHAI focal States, there is regular monitoring of vaccine utilization, physical stock counts and weekly triangulation to determine the wastage rate and ensure accountability.

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² Traditional roll-out, Electronic self-registration, Assisted electronic registration, Concomitant, H2H teams
³ Primary Health Care Services Integrated with COVID-19 vaccination
⁴ Supervisory, Communication, Accountability, Logistics, EMID, Service Delivery.
Service delivery

- Routine weekly supportive supervision and on-the-job mentoring at vaccination sites helped improve reporting efficiency.

- The use of temporary fixed posts in addition to the fixed posts, increased the number of mobile teams and the adoption of a mobile outreach team from the RI programme helped reach all planned priority groups and hard-to-reach settlements.

- Development of a State-specific COVID-19 dashboard to serve as an accountability tool for vaccine utilization, vaccination coverage and vaccination progress tracker and to identify low-performing Local Government Areas (LGAs) with challenges to be addressed during review meetings.

Capacity building/training

- Across its focal States, CHAI facilitated the training of recruited and active recorders for the EMID (Electronic Management for Immunization Data) platform. This also served as a refresher training to build capacity on the usability and functionality of the electronic platform, reduce the knowledge gap, and improve their performance.

- In Lagos State, CHAI facilitated the capacity building of Health Education Officers and the State Social Mobilization Committee (57 HEOs and 50 SSMC members) on how to effectively sensitize the public and improve their method of delivering key messages.
Demand generation

- CHAI funded the engagement of traditional and religious leaders in Yobe State to sensitize them on the critical role they play in improving demand generation and securing their buy-in.

Lessons learnt during implementation

- The Nigeria COVID-19 vaccination strategy was shaped by constant and iterative reviews of the roll-out strategy informed by LGA mapping, availability, and routine monitoring of vaccine uptake data, security challenges, and identification of missed communities and hard-to-reach areas. This ensured the strategy was regularly optimized to achieve equitable access to all Nigerians.

- With epidemiological changes in the virus, there was a need to update the Government’s overall response approach constantly. CHAI has supported Nigeria in designing and implementing agile, integrated, and responsive COVID-19 vaccination strategies using up-to-date, rigorous evidence.

- Given Nigeria’s geographical size and disparities, including security challenges, cultural diversity and context, State-based and sometimes LGA-specific adaptations are necessary for the successful deployment of national COVID-19 testing and vaccination strategies.
5. TECHNICAL/SCIENTIFIC UPDATE: GOOD PRACTICE STATEMENT ON THE USE OF VARIANT CONTAINING COVID-19 VACCINES.

The Good practice statement on the use of variant-containing COVID-19 vaccines summarizes current evidence on variant-containing mRNA vaccines and provides guidance on their use in the context of the continued availability of ancestral virus-based COVID-19 vaccines. The recommendations apply to all COVID-19 vaccines; however, at this point only variant-containing mRNA vaccines have received emergency authorization. More information on variant-containing vaccines can be found at https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Variants-2022.1.

Background

In an effort to broaden and further enhance protection against circulating and emerging variants, and consistent with the interim statement issued by the Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC), a number of manufacturers have developed variant-containing vaccines, including a number of bivalent formulations that retain the index virus/ancestral virus. Four bivalent variant-containing vaccines are currently authorized as booster doses by various stringent regulatory authorities (SRAs). Pfizer-BioNTech and Moderna have each developed two of these variant-containing vaccines – each one containing the ancestral strain of the SARS-CoV-2 virus and the Omicron BA.1 subvariant, and each one containing the ancestral strain of the SARS-CoV-2 virus and the Omicron BA.4/5 subvariant.

Good practice statement

Despite considerable virus evolution, the original COVID-19 vaccines, based on the ancestral virus, maintain relatively high vaccine effectiveness against severe disease in the context of the Omicron variant (the current predominant variant globally) and its descendent lineages, in particular when booster doses have been administered. However, some immune evasion has been observed in the context of the Omicron variants that are currently circulating. Recently authorized, bivalent variant-containing mRNA vaccines may broaden and enhance the immune response to Omicron and its descendent lineages when administered as a booster dose. As data become available for bivalent vaccines using vaccine platforms other than the mRNA platform, the Strategic Advisory Group of Experts (SAGE) on Immunization will review such data and update this guidance as appropriate.
Primary series

Until supportive evidence or regulatory approval become available, variant-containing vaccines should not be used as the primary series. For the primary series, any of the WHO Emergency Use Listing (EUL) COVID-19 vaccines can be used. Achieving very high and equitable vaccine coverage rates of the primary series with the ancestral virus COVID-19 vaccines globally remains the highest priority, particularly among groups that are at higher risk of severe disease and death. Increasing the primary vaccination series coverage rate has a greater impact on reducing hospitalizations and deaths per dose than use of equivalent vaccine supply to increase the booster dose coverage rate.

Booster doses

Data that are currently available are not sufficient to support the issuance of any preferential recommendation for bivalent variant-containing vaccine boosters over ancestral-virus-only boosters. The immunogenicity data comparing bivalent Omicron-containing boosters to the monovalent ancestral boosters demonstrate only modest superiority, and the impact on vaccine effectiveness remains to be demonstrated. Consequently, at this time, WHO recommends that any WHO EUL COVID-19 vaccines or authorized mRNA bivalent variant-containing vaccines can be used for booster vaccination. There is increasing evidence that boosters using a different COVID-19 vaccine platform from that used for the primary series (heterologous boosting) may provide superior immunogenicity to use of a homologous booster. There are currently no data comparing the vaccine effectiveness of heterologous boosters with variant-containing boosters.

General considerations

When deciding between using the ancestral-virus WHO EUL COVID-19 vaccines or using new variant-containing vaccines for either the first or second booster dose, each country needs to take into account access to such vaccines and costs. Countries should not delay implementing first or second boosters while waiting for access to variant-containing vaccines. There is greater benefit in ensuring that persons at high risk of developing severe COVID-19 receive a booster 4–6 months after the previous dose, rather than extending this interval in anticipation of a variant-containing vaccine.

Vaccination should be offered regardless of a person’s history of symptomatic or asymptomatic SARS-CoV-2 infection. Vaccination of recently infected persons is not known to be associated with increased adverse effects. WHO does not recommend pre-vaccination screening for prior infection. Individuals who have had SARS-CoV-2 infection (confirmed by PCR or antigen test) after the previous dose could consider delaying the booster dose by 4–6 months; however, such considerations should not interfere with the programmatic roll-out of booster doses.

The optimal interval between vaccination after infection is currently not known. WHO recommends that countries consider co-administration of COVID-19 vaccines (including variant-containing vaccines) with seasonal influenza vaccines, whenever epidemiologically justified. Based on several co-administration studies of COVID-19 vaccines and inferred from co-administration studies of other adult vaccines, COVID-19 vaccines may be given concomitantly, or any time before or after, other vaccines for adults and adolescents, including live attenuated, inactivated, adjuvanted, or non-adjuvanted vaccines. When administered concomitantly, the vaccines should be injected in separate sites, preferably different extremities. Continued pharmacovigilance monitoring is recommended. WHO aims for a life course approach to the implementation of all vaccines including COVID-19 vaccines. Such a programmatic approach will help to achieve a higher uptake of vaccines, increase the efficiency of vaccine roll-out and protect stretched health-care systems.

It should be noted that the variant-containing COVID-19 vaccines are not yet available in Africa.
6. USEFUL LINKS

- AFRO COVID-19 Vaccination dashboard:

- AFRO microsite on lessons learnt in rolling out COVID-19 vaccination
  https://covid-19vaccineslessonslearned.afro.who.int/

- AFRO COVID-19 dashboard:
  https://who.maps.arcgis.com/apps/dashboards/0c9b3a8b68d0437a8cf28581e9c063a9

- AFRO Country Profile Dashboard:
  https://worldhealthorg.shinyapps.io/Covid19countryProfileDashboard/
## APPENDIX: DOSES ADMINISTERED AND VACCINATION COVERAGE BY COUNTRY IN THE WHO AFRICAN REGION (DATA AS OF 4 December 2022)

<table>
<thead>
<tr>
<th>Country</th>
<th># Doses received</th>
<th># Doses administered</th>
<th># Vaccinated with at least one dose</th>
<th># Fully vaccinated</th>
<th>% Doses administered</th>
<th>% Vaccinated with at least one dose</th>
<th>% Fully vaccinated</th>
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<td>3 915 940</td>
<td>2 612 343</td>
<td>1 123 773</td>
<td>1 088 142</td>
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<td>88.8</td>
<td>86</td>
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<td>4 372 595</td>
<td>3 825 381</td>
<td>3 671 160</td>
<td>66</td>
<td>82.3</td>
<td>78.9</td>
</tr>
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<td>85 770</td>
<td>81 629</td>
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<td>26 106 436</td>
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<td>308 720</td>
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<td>3 099 433</td>
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<td>1 424 985</td>
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<td>68.4</td>
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<td>56.1</td>
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<td>397 080</td>
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<td>48.4</td>
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</tr>
<tr>
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<td># Vaccinated with at least one dose</td>
<td># Fully vaccinated</td>
<td>% Doses administered</td>
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<td>% Fully vaccinated</td>
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<td>1 630 600</td>
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<td>3 236 630</td>
<td>833 210</td>
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<td>4 210 150</td>
<td>3 098 178</td>
<td>2 481 414</td>
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<tr>
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<td>4 035 545</td>
<td>3 306 174</td>
<td>2 782 035</td>
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<td>1 992 277</td>
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<td>Democratic Republic of Congo</td>
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<td>6 185 534</td>
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<td>Burundi</td>
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<td><strong>Total</strong></td>
<td>729 051 062</td>
<td>510 613 197</td>
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</table>
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