



### COVID-19 information note 14

## Reflections from the COVID-19 vaccination campaign and future directions

### COVID-19 vaccine campaign: first phase

Somalia rolled out the coronavirus disease 2019 (COVID-19) vaccination campaign nationwide on 16 March 2021 with 300 000 doses of the Oxford/AstraZeneca vaccine received from the COVAX facility<sup>1</sup> as part of the Gavi COVAX Advance Market Commitment supporting access to COVID-19 vaccines for lower-income countries. The first phase of this campaign initially prioritized high-risk populations such as frontline workers, health care workers, people older than 50 years and people with co-morbidities. According to the National Vaccine Deployment Plan of Somalia, these groups together made up 3% of the country's population. The first phase of the campaign ended on 15 July 2021, with a total of 279 279 doses of the vaccine having been administered. Somalia, despite the fragility of its health systems, lack of funding and operational challenges in conducting campaigns in insecure areas, was one of the few countries

### COVID-19 vaccination in Somalia: key messages

- **The need to vaccinate.** Currently, vaccines and proven non-pharmaceutical interventions are the only way for Somalia to bring an end to the COVID-19 pandemic. Data from other countries show that even limited vaccination resources can be organized for maximum impact, if deployed with proper planning. As vaccination coverage and uptake is low, Somalia can expect further waves of infection. However, promising data from analysis of epidemiological data in Somalia show that as the cumulative number of COVID-19 vaccine doses administered increases, the weekly number of new cases decreases across the country. This highlights the benefits of rolling out COVID-19 vaccination rapidly and widely.
- **The need to accelerate vaccination.** If the current pace of vaccine delivery and vaccination does not improve in Somalia, it could take 26 months to vaccinate 40% of the population. Thus, at the moment, Somalia is likely to miss WHO's global goal of vaccinating the most vulnerable 10% of the population against COVID-19 by the end of September and 40% by December 2021. To avoid further disruptions to and strain on the health services, especially as the country is experiencing a new wave of infections from COVID-19, it is imperative that these targets not be missed. Somalia needs therefore to drive forward an acceleration plan to rapidly vaccinate its population.
- **The need to tackle operational challenges.** As more vaccines arrive in Somalia, which is likely given the COVAX distribution and allocation scenarios for the fourth quarter of 2021, the country needs to address the operational challenges (e.g. logistics, planning and monitoring capacities) and continue to improve its COVID-19 vaccination campaigns. At the same time, donor communities and partner agencies should also look for funds to support the huge operational cost of speeding up the campaigns.

<sup>1</sup> COVAX is the vaccines arm of the Access to COVID-19 Tools Accelerator, a global collaboration to accelerate the development and production of and equitable access to COVID-19 tests, treatments and vaccines.

in Africa that was able to administer more than 90% of its allocated vaccines before the vaccine's expiry date. Wastage during this round was only 8.6%, which was within an acceptable limit. In the first phase, 92 614 people received both doses of the vaccine – 0.62% of the total population of over 15 million – while 186 665 people (about 1.2% of the population) received the first dose only. Although, the vaccination campaign was the first step for the country to end the pandemic, the low and uneven uptake of COVID-19 vaccines among high-risk populations in the country was not promising.

### Who was vaccinated?

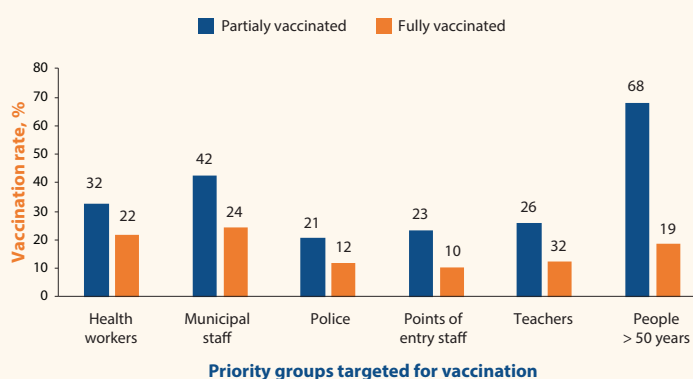
The COVID-19 vaccination rate among the priority groups targeted in the first phase was low, as shown in Fig. 1. Only 32% of targeted health care workers, 26% of teachers, 42% of municipality workers, 21% of police and 23% of points-of-entry staff (immigration officials managing designated ports) were vaccinated with the first dose. However, among the elderly people targeted, 68% received a first dose of the vaccine. The proportions of all these priority groups that were fully vaccinated were also low (Fig. 1).

More males than females received the COVID-19 vaccine (64% versus 36%) in all age groups (Fig. 2). Although, the

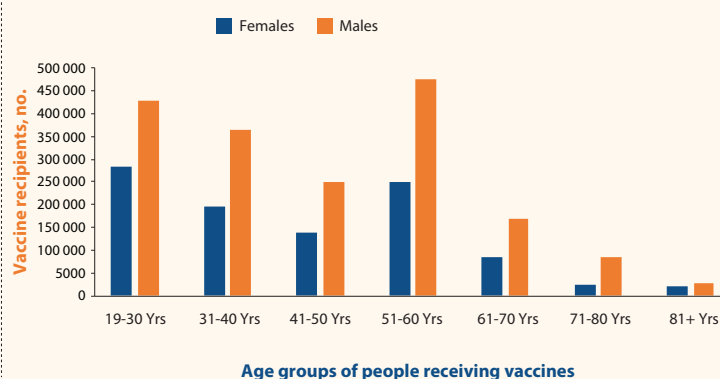
campaign targeted elderly people older than 50 years, only 19% of this group were fully vaccinated (Fig. 1). Over 90% of people who died from COVID-19 in Somalia were older than 50 years and as only 19% of people in this age group received two doses of the COVID-19 vaccine, hospitals in Somalia may see more cases in this age group, which is likely to strain the health system. More people living in urban areas (92.5%) than rural areas (6,1%) were vaccinated and very few people living in camps for internally displaced people (0.7%), refugee camps (0.1%) and nomadic settlements (0.6%) were vaccinated.

In the first phase of the campaign, only people who were able to visit the vaccination centres received the vaccine. Operational, institutional and health system issues which characterize mass adult immunization campaigns might have resulted in fewer people in the priority groups being vaccinated than originally anticipated. This situation has implications for the fragile health system in the country: without vaccinating the high-risk priority groups, the pandemic may continue to claim lives and overstretch the health system as more hospitalizations are likely, which has been seen in other countries with low vaccination uptake.

**Fig. 1: Vaccination rate among priority groups in the first phase of the COVID-19 vaccination campaign, Somalia, 16 March–17 July 2021**



**Fig. 2: COVID-19 vaccination by age group and sex, Somalia, 16 March–17 July 2021**



### What were the constraints?

A number of operational challenges arose during the first phase of the vaccination campaign.

- **Low demand for vaccines.** This was seen in all federal member states, most notably during administration of the second dose to those who had received the first dose. This low demand was attributed to misinformation

and disinformation about vaccine side-effects. Low perception of the risk of COVID-19 among some healthy individuals was a contributing factor. The low uptake of the vaccine among health workers also had a negative influence on the community about getting vaccinated for protection. Lack of knowledge and perception of vaccine safety and efficacy may have also played a part in the low demand for the vaccine.

- **Unpredictable timeline for vaccine allocation and delivery.** This problem prevented a rapid vaccine scale-up. The country stopped vaccinating more people with the first dose when it was clear that the supply would remain unpredictable for some time. Doses of the vaccine had to be kept to ensure that all eligible recipients of the first dose received their second dose before the vaccines expired and within the time set by WHO between the first and second dose.
- **Lack of funds for operational cost.** The lack of funds impeded improved coverage and uptake. United Nations agencies (WHO and UNICEF) had to repurpose the budget and allocate funds to cover the operational cost

which were not sufficient to address vaccine hesitancy, manage outreach services and deploy vaccines and vaccinators in remote and geographically inaccessible areas in large numbers.

- **Poor coordination.** Poor coordination between state, regional and district levels impeded vaccination roll out and led to inadequate planning and decisions-making to address low uptake in certain districts while the campaign was ongoing.
- **Security.** The security situation in the country also caused delays and timely delivery of COVID-19 vaccines to certain districts.

## COVID-19 vaccine campaign: planning the second phase

### Vaccine availability until December 2021

Strategies for more rapid deployment of vaccines will be needed to support the next phase of the campaign until the end of December 2021. The current supply forecast up to December 2021 (Table 1) shows that Somalia is expected to receive new batches of different vaccines donated by countries through the COVAX facility or provided through COVAX directly.

As of September 2021, the country has received or received confirmation of future delivery of 1 242 580 doses of COVID-19 vaccines (including all donations), excluding the allocation for quarter four which is yet to be determined (Table 1). This number of doses can fully vaccinate 489 065

people: 302 400 people with the Janssen vaccine, which requires only one dose + 186 665 people who received the first dose of the AstraZeneca vaccine in the first phase and are waiting for their second dose, which leaves 753 515 doses of the two-dose vaccines. Thus (excluding the allocation for quarter four), the country is expected to have fully vaccinated 581 679 people (3.8% of the population) by 31 December 2021 and vaccinate 753 515 people with one dose, meaning that 10% of the population will have received at least one dose of a COVID-19 vaccine. COVAX is committed to providing vaccines for 20% of the populations of eligible countries by the end of 2021. Whether this is achieved will depend on the number of vaccines Somalia receives for the fourth quarter.

**Table 1: COVID-19 vaccine supply, Somalia, 2021**

Time	Type of vaccines	Amount	Comment
March 2021	Sinopharm	200 000	Valid for use until 2022. Donated by China
August 2021	AstraZeneca	108 000	Valid for use until 31 October 2021. Donated by France
August 2021	Janssen (Johnson & Johnson)	302 400	Valid for use until 31 December 2021. Donated by the USA
August 2021	AstraZeneca	151 200	Expected. Donated by France
September 2021	Pfizer	250 380	Expected through COVAX
September/October 2021	Sinopharm	230 600	Through COVAX
September–December 2021 (quarter 4)	TBD (any of the vaccines in the WHO emergency use listing: AstraZeneca, Janssen, Moderna, Pfizer and Sinopharm)	Unknown <sup>a</sup>	Through COVAX

**Total (except the fourth quarter allocation)**

**1 242 580**

TBD: to be decided; USA: United States of America.

<sup>a</sup>Based on current information, a limited quantity is expected to be available for shipment in October with increasing amounts in November and December.

## Forecasting needs to achieve high vaccine coverage

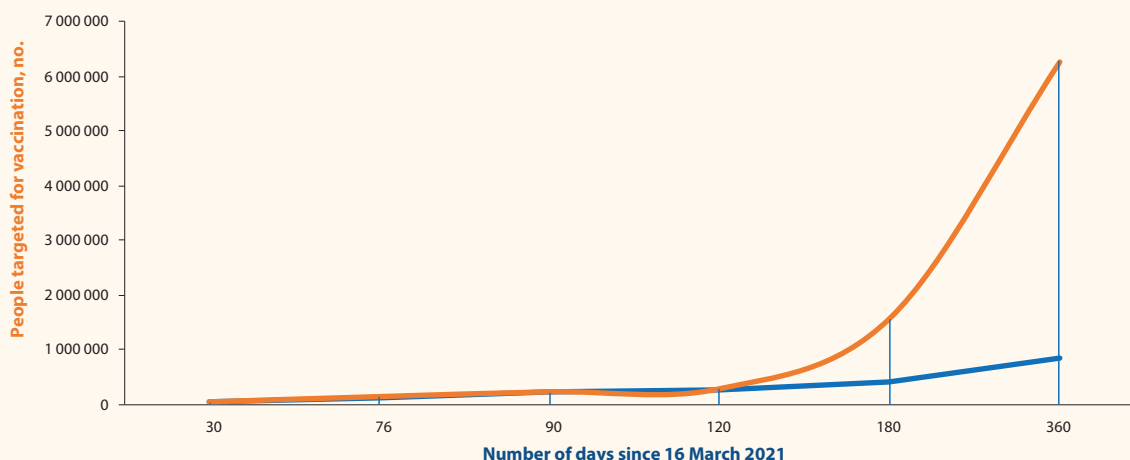
With the current vaccine supply situation and unless the country speeds up its vaccination drive, Somalia will miss the WHO target of vaccinating at least 10% of its population by September 2021 and 40% by December 2021, a global target set by the World Health Assembly in May 2021. The current unpredictable supply forecast and the lack of funding for operational costs may severely impede vaccination.

In order for Somalia to meet these WHO targets, Somalia may require an additional 10,457,420 (based on a two-dose regimen) doses of vaccines. Furthermore, assuming these doses are available, the country will need to vaccinate at least 61 174 people a day between now and end of September and 54 470 (based on a two-dose regimen) people a day between now and end of December 2021 (Fig. 3). Since 16 March 2021, the country has vaccinated 279 279 people in 120 days. The country's average uptake was 6200 doses a day and the maximum number of doses administered in a single day was 10 800. At this speed, the

country may manage to vaccinate more than 400 000 people by the end of September and more than 800 000 people by the end of December. Unless the vaccination campaign picks up speed and scale and can vaccinate at least 50 000–60 000 people a day (5 times the current rate), it is unlikely that WHO targets will be met by Somalia. Furthermore, the country will need a reliable supply of more than 10 million vaccine doses between now and December 2021.

The requirements for vaccinators and teams to be deployed to administer the 1.2 million COVID-19 vaccine doses that the country currently has in stock are shown in Table 2. Nationwide, 1581 vaccination teams comprising of 1581 vaccinators, 3164 social mobilizers and 3164 data assistants will need to be deployed. However, if the WHO targets of vaccinating at least 10% of the population by September and 40% by December 2021 are to be met, the country may need 8498 teams comprising of 8498 vaccinators to vaccinate at least 50 000–60 000 people a day between now and December 2021.

**Fig. 3: Current and simulated vaccination target to meet the WHO targets**



**Table 2: Human resources required to administer available COVID-19 vaccines by December 2021, by state, Somalia**

State	Expected allocation	Teams required	Supervisors	Vaccinators	Data assistants	Social mobilizers
Banadir	401 580	535	535	535	1070	1070
Hirshabelle	70 000	93	93	93	186	186
Galmudug	50 000	67	67	67	134	134
South West	70 000	93	93	93	186	186
Jubaland	100 000	133	133	133	266	266
Puntland	155000	207	207	207	414	414
Somaliland	340 000	453	453	453	906	906
<b>Total</b>	<b>1 242 580</b>	<b>1581</b>	<b>1581</b>	<b>1581</b>	<b>3164</b>	<b>3164</b>

## Securing funds for operational costs

Funding of operational costs and timely disbursement of the funds will remain an impediment for countries like Somalia to reach the WHO targets. Administration of a single COVID-19 vaccine dose will cost US\$ 5, which means the country may need US\$ 50 985 108 for an estimated 10 million doses under a scaled-up vaccination drive.

## Ensuring a responsive and agile vaccination strategy

Following the first phase of the vaccination campaign, the focus should shift to vaccinating all people older than 18 years in Somalia. In view of the challenges faced in the first phase, the following operational strategies are likely to help boost vaccine uptake if planned and implemented effectively. This will need a tailored and measured approach, taking into consideration the context of different parts of the country, especially in federal member states.

- **Addressing vaccine hesitancy:** Effective and active health marketing and promotion that can reach all groups, including women, who will be potentially targeted for vaccination will be key to overcome vaccine hesitancy. It should be noted that the factors in 3C model of vaccine hesitancy – complacency, confidence and convenience – act to impede vaccination. Populations among whom vaccine hesitancy should be urgently addressed include those with high exposure to the virus (e.g. health care workers, teachers and other frontline workers managing essential public functions) and those at high risk of severe disease and death (e.g. elderly people and people with noncommunicable diseases and chronic infections). Elderly people, traditional and religious leaders (imams), teachers, community role models, trade bodies, professional bodies and other groups of people who are opinion-builders in society should be engaged for advocacy to ensure that as many people as possible are vaccinated as quickly as possible. Using high-profile people, such as political leaders and social celebrities, to promote COVID-19 vaccination may help improve uptake. A strategic communication response plan should also seek to disprove disinformation and misinformation and discourage and counteract irresponsible, non-factual statements made on social media by individuals and political and community leaders. Vaccine safety and efficacy should be highlighted in all communication-related events. Previous COVID-19 vaccination campaigns had no or very limited information, education and communication material. Thus, sufficient such materials, including

posters, banners and leaflets, should be available to provide information for the community.

- **Expanding the eligibility criteria for vaccination:** About 70% of Somalia's population are younger than 30 years. Therefore, it is justifiable to reduce the age limit for COVID-19 vaccination to younger than 30 years provided that the government still targets the elderly people and other high-risk group as a priority to receive the vaccine<sup>2</sup>. Vaccinating younger people older than 18 years may also reduce the chain of transmission, as when younger people are infected with the COVID-19 virus, they often silently transmit the infection to elderly people in their households.
- **Organizing outreach services:** Evidence has shown that achieving rapid coverage in a defined geographical location is possible through a combination of fixed, satellite vaccination posts closer to the population and outreach services. This approach is especially useful to cover populations that do not live within easy access of vaccination centres, such as nomadic populations and internally displaced people. Outreach services should be considered in areas where distance, security or other operational challenges limit access of the nearby population to vaccination centres. The opening times of these centres should also be convenient for everyone – working people as well as those engaged in outdoor activities. Ideally, COVID-19 vaccination centres should not be placed in hospitals or health facilities. It is possible to rapidly convert large public spaces into outreach vaccination hubs (e.g. places of worship, sporting venues, prisons, airports, community halls, main highways and schools) to improve rapid access to vaccines for eligible groups and to achieve maximum scale and efficiency. Having both fixed and outreach sites will benefit everyone, especially internally displaced people, nomadic communities and people in hard-to-reach areas. The large number of female health workers and social mobilizers supported by various UN agencies and nongovernmental organizations need to be deployed to identify high-risk groups and refer them to vaccination centres. The large polio workforce should also be mobilized in the vaccination drive to monitor and supervise vaccination, ensure that targets for each centre are reached.

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<sup>2</sup>Recent modelling data have shown that prioritizing people older than 60 years would have the greatest effect on deaths.

- **Vaccinating health care workers in the public and private health sector:** Vaccinating all health care workers in the country should be a policy decision because they need to have the best protection. Mandatory vaccination has proven effective in ensuring high childhood immunization rates in many countries. Mandatory vaccination of health care workers has also improved uptake of influenza vaccination in many countries. Vaccination mandates should be imposed only after a time-limited trial of voluntary vaccination has proved unsuccessful. Public health ethics support the use of more flexible policies whenever possible before moving to stricter ones.
- **Protecting staff of high-contact settings:** Civil servants and other frontline staff working in high-risk and contact settings, which includes public offices, airports, banks, schools and universities, should be prioritized for vaccination. The government should use discretion to ensure that all these staff are vaccinated in order to reduce the risk of infection inside these premises and to protect these essential staff from exposure.
- **Engaging the private sector:** It is important to engage nongovernmental organizations and the for-profit private sector (banks, schools) in the vaccination programme. Staff of nongovernmental organizations are a priority group for vaccination as they work directly with communities. As such, nongovernmental organizations managing health,

education, nutrition, water, sanitation and hygiene (WASH) and food should be engaged to actively assist in improving vaccine uptake, not only among their own staff but also among internally displaced people, nomadic communities, refugees and other vulnerable groups which they support. Active engagement of community-based organizations will be crucial for successful vaccine roll-out and tackling vaccine hesitancy.

- **Organizing ring vaccination:** In the face of supply constraints and ongoing community spread of COVID-19, districts most at risk of resurgence could be identified in advance (epidemiological data and the findings of serological surveys can indicate regions or districts with lower levels of previous exposure and hence at greater risk). Spatial targeting of districts is a useful vaccination strategy in such situations. If the transmission appears to be geographically localized, outbreak response efforts could adopt a ring vaccination strategy by focusing first on the neighbourhood with this infection activity before expanding to cover the rest of the district.
- **Improving coordination:** Coordination between all ministries at the federal level with participation of all states and partners needs to be improved and strengthened. Weekly coordination meetings chaired by a higher authority will be more effective. The same coordination mechanism needs to be replicated at the state level, ensuring participation of all ministries and partners.



## COVID-19 vaccination drive: a golden opportunity to strengthen the health system

The current COVID-19 vaccination drive is the largest one in Somalia's history, not only in terms of the number of doses to be administered or people to be vaccinated, but also in terms of the cost of vaccines and the need to cover at least 70–75% of the population to achieve herd immunity against COVID-19.

Given the enormous investment that is being made in vaccination against COVID-19 (please see COVID-19 information note 11 available at <http://www.emro.who.int/images/stories/somalia/documents/covid-19-information-note-11.pdf?ua=1>

there is both a moral and practical incentive to use the opportunity to strengthen the immunization delivery systems and infrastructure to ensure improved vaccine access and equity for routine immunization. Furthermore, the system built to respond to COVID-19 provides an opportunity to improve the health system. Such an improved system could be used beyond the current crisis and as a long-term solution for future health emergencies. As such, the efforts made to roll out the COVID-19 vaccine provide the following opportunities to support, improve and strengthen broader areas of the health system in the country.

- Strengthen national regulatory systems which are currently non-existent or non-functioning in the country.
- Improve essential aspects of the vaccine delivery chain, including creating an environmentally friendly cold chain and a high-quality, large-capacity storage infrastructure and maintaining an efficient cold chain. This improvement will make it easier to introduce new vaccines into the routine immunization schedule and to roll out any other vaccines for epidemic and pandemic response in the future (e.g. Ebola virus disease vaccines, malaria vaccines).
- Digitalize registration and vaccine information systems for tracking vaccines and monitoring vaccination side-effects. This will help improve health information management systems and data collection in real time for monitoring routine immunization.

- Improve health care waste management systems which are currently non-existent in the country.
- Establish effective pharmacovigilance for routine immunization which is currently non-existent.
- Develop an effective health communication strategy to tackle vaccine hesitancy for vaccination against other diseases, especially for the childhood immunization programme.
- Deliver other priority mother and child health interventions in combination with delivery of COVID-19 vaccines (e.g. vitamin-A, iron and folic acid supplements, nutrition counselling and care for noncommunicable diseases).

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