



COVID-19 information note 11

Rolling out vaccines against COVID-19 in Somalia: scale and speed are needed

Somalia received the first batch of coronavirus disease-2019 (COVID-19) vaccines from the COVAX facility on 15 March 2021, one day before the country marked the 1-year anniversary of the first laboratory-confirmed case of COVID-19, a Somalia student returning from China. By the time, the country received the vaccine against COVID-19, the number of reported cases had increased to 9968 with 419 associated deaths.

Since February 2021, Somalia has been experiencing a new and more severe wave of COVID-19 infections. Modelling data showing projections until the end of May indicate a continuous upward trend of COVID-19 cases and, if containment measures are not effective, on average, 1100–1400 cases of COVID-19 and 30–40 deaths a week between March and April 2021. With the likelihood of this recent surge of COVID-19 infections taking a devastating human toll in Somalia’s fragile and vulnerable setting, the arrival of the first batch of COVID-19 vaccines in Somalia on 15 March 2021 brought hope of protecting high-risk populations and ending the epidemic in the country.

Roll out of COVID-19 vaccines: race against time

The roll out of the COVID-19 vaccine in Somalia was the result of coordinated action by both the WHO and UNICEF country offices and positive discussions with the COVAX facility to provide an early and adequate allocation of vaccines for the country given its fragile position. It was a race against time to complete the documentation required for the formal allocation letter, e.g. signed indemnity and authorization letters from



the national regulatory authority. In addition, intense work that began in November 2020 with the country readiness assessment led to submission of the national vaccine deployment plan for COVID-19 on 7 December 2020. When Somalia received the first batch of 300 000 doses of the AstraZeneca vaccine, it became only the 12th country in Africa to have received vaccines against COVID-19 and one of the few that has actually started vaccination against COVID-19.

Status of COVID-19 vaccination: a concern for public health

With unprecedented speed and scale, Somalia rolled out its vaccination campaign against COVID-19 almost immediately after the vaccines were received. The first batch of 300 000 doses was allocated for vaccination of health care workers, other frontline workers (e.g. municipality and nongovernmental organization workers, police personnel and immigration officials) and elderly people with or without co-morbid conditions who together comprise of 3% of the country’s total population. After conducting rapid rounds of training for vaccinators and with microplanning done at the federal and state level,

assisted by WHO and UNICEF, vaccines were distributed to all the states including to Somaliland from 15 to 24 March (Table 1). Vaccines were transported by special flights offered by the United Nations World Food Programme. On 16 March 2021, the country launched its largest ever mass vaccination campaign by administering the first dose of the AstraZeneca vaccine against COVID-19 in Mogadishu. From 16 March to 22 April, 120 337 (40.1%) doses of vaccines were administered across the states and regions of the country

(Table 1), on average about 3 250 people a day. Currently, owing to the Ramadan, the number of doses being administered are about 400–500 a day, but on 31 March, over 10 000 people were vaccinated in one day, the highest daily number so far.

Nonetheless, so far, only 0.8% of the country’s population has received one dose of the vaccine and two doses are needed for full vaccination against COVID-19.

Table 1: Roll out of COVID-19 vaccines in Somalia in the first phase, by state/region up to 22 April 2020

State/region	Doses allocated, no.	Date vaccines arrived at location	Start date of campaign	Expected end date of campaign	Doses administered, no. (%)
Banadir	85 000	15 March	16 March	Not yet decided	20 176 (23.7)
Galmudug	25 000	24 March	29 March	Not yet decided	10 103 (40.4)
Jubaland	30 000	22 March	22 March	28 April	6566 (21.9)
South West	30 000	24 March	28 March	Not yet decided	5520 (18.4)
Hirshabelle	25 000	24 March	29 March	Not yet decided	11 200 (44.8)
Puntland	40 000	16 March	27 March	Not yet decided	14 499 (36.2)
Somaliland	65 000	16 March	23 March	Not yet decided	52 273 (80.4)
Total	300 000				120 337 (40.1)

Note: The data show the administration of first dose of the vaccine only.

The data on doses administered also show that more males (70%) than females have been vaccinated against the COVID-19 so far and, with regard to high-priority groups, only 23% of health workers, 47% of other frontline workers and 30% of elderly people with or without comorbidities have been vaccinated so far (Fig. 1). This low number of vaccine doses administered so far and poor uptake is a

public health concern as most of the people at risk, including health care workers, are still not vaccinated. Most importantly, delay in fully rolling out the programme will have implications on the subsequent allocation of vaccine doses the country will receive from the COVAX facility to cover the rest of the population of Somalia.¹

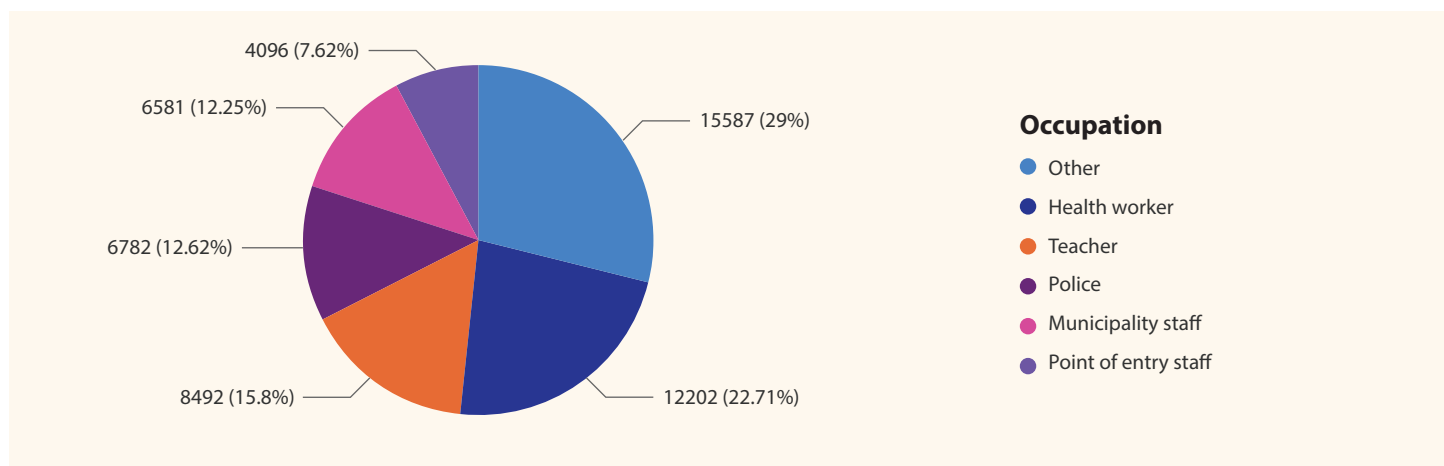


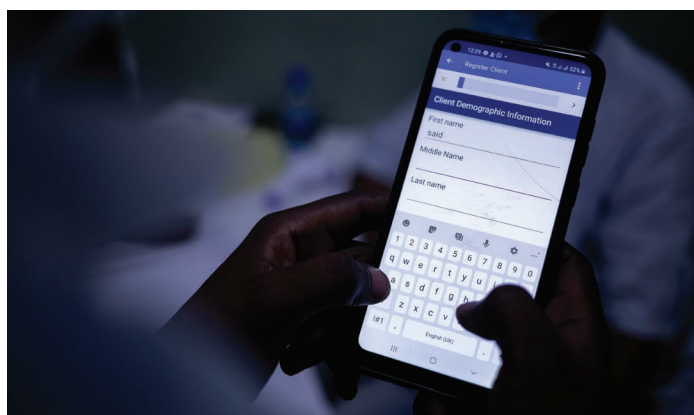
Fig. 1: Distribution of high-priority groups vaccinated against COVID-19 according to occupation, Somalia, April 2021

¹ Somalia, being a country eligible for advance market commitment (AMC), is expected to receive at total 6 268 212 million doses of the AstraZeneca vaccine from the COVAX facility to cover 20% of its total population (about 15 670 529 people). The country received 300 000 doses as its first allocation on 15 March 2021 to cover 1% of its population. The country is expected to receive an additional 744 000 doses during April–June to cover a further 2% of its population and between July and December, the country is expected to receive the remaining 55 313 200 doses to cover the remaining of 17% of the total population.

Use of CommCare: innovation for future immunization services

One of the most important innovations during the roll out of COVID-19 vaccination has been the introduction of a mobile telephone based electronic registration system. Somalia, with the support of WHO, has introduced this system to register every person receiving COVID-19 vaccines. Use of this mobile application by frontline health workers managing the vaccination posts has strengthened performance, efficiency and outcomes.

CommCare (www.commcarehq.org), first developed by the software company Dimagi (www.dimagi.com), is a customizable, open-source mobile platform that enables non-programmers to build mobile applications for data collection and a variety of other functions. This application (app) runs on Android smart phones and tablets. The app is being used to introduce an electronic vaccination registration form and to track and monitor side-effects and other adverse events for each vaccine recipient following vaccination. The app allows SMS reminders to be sent to each vaccine recipient about their second dose.



Operational costs to support COVID-19 vaccine roll out: a worrying funding gap

The country's capacity to expand the roll out is also severely hampered by funds as the Ministry of Health, which is dependent on donors and UN agencies for many of its routine and operational activities, was not able to find the necessary funds to support the roll out of vaccines. One of the reasons for the current low uptake of vaccination is attributed to lack of funds to organize outreach services for some priority groups because of difficulties in access and the security situation in the country. The country is expected to receive 6.2 million doses of vaccines from the COVAX facility without funds to cover the operational costs to support the roll out. Therefore, agencies such as WHO and UNICEF are struggling to support the operational costs, which are essential for any successful vaccination roll-out programme.

WHO and UNICEF have estimated that US\$ 25 383 640 are needed to cover operational costs to ensure the efficient and effective roll out of all three phases of the COVID-19 vaccine campaign across Somalia including in Somaliland (Table 2). This amount is still missing as no donors have made a commitment or pledge to support the operational costs. WHO and UNICEF continue to find and repurpose funding from other priority programmes, especially routine immunization programmes, to support the current roll out of COVID-19 vaccination. This might seriously hamper the routine immunization programme in the country which depends entirely on resources allocated by WHO and UNICEF for vaccination against the childhood diseases. In the absence of any funding to support the current roll out of vaccination against COVID-19 and with bigger quantities of vaccines expected to be available in the coming weeks, the current constraints may be amplified resulting in very low uptake of COVID-19 vaccines in the general population.

Table 2: Estimated operational cost for roll out of COVID-19 vaccination in Somalia to cover 20% of the population

Type of cost	Number of vaccine doses	Funding needed for WHO, US\$	Funding needed for UNICEF, US\$	Total funding needed to cover operational costs, US\$
<i>Vaccine roll out</i>				
March–April 2021	300 000	464 667	580 326	1 044 993
April–June 2021	744 000	2 745 196	855 179	3 600 375
July–December 2021	5 313 200	9 316 990	9 333 449	18 650 439
Subtotal	6 357 200	12 526 853	10 768 954	23 295 807
<i>Programme support^a</i>		876 880	861 516	
<i>Bank charges</i>		187 903	161 534	349 437
Total		13 591 636	11 792 004	25 383 640

^a Based on standard rate of programme support cost: 7% for WHO and 8% for UNICEF.

Note: The cost is estimated on the basis of allocation of responsibilities of WHO and UNICEF in the roll out programme. WHO is responsible for planning and coordination, cost of electronic registration, training, vaccinator per-diems and transportation costs as well as surveillance for adverse events and monitoring the campaigns. UNICEF is responsible for procurement of logistics (e.g. syringes and safety boxes) distribution of vaccines and supplies, cold chain, waste management and social mobilization activities.

Meeting targets: what can realistically be done?

The current strategy to reach more people and achieve higher vaccination coverage is failing. A tailored, measured and agile approach needs to be rapidly implemented and operationalized for sufficient vaccine uptake to be achieved to reach COVID-19 “herd immunity” in Somalia. Although the exact vaccination rate needed to achieve herd immunity is still unknown, it could be as high as 80–95%, as it is for other vaccine-preventable diseases. According to models assuming a vaccine efficacy of 80%, the percentage of the population that needs to be vaccinated to reach herd immunity ranges from 75% to 90% (depending on factors such as the basic reproduction number (R_0), duration of vaccine-induced immunity and whether vaccines prevent transmission).

Learning from experience and making use of successful strategies for the distribution and promotion of other vaccines (e.g. polio and measles vaccines, and cholera vaccines) across countries and identifying barriers to vaccination are vital so as to develop a strategy that can maximize vaccine uptake in the context of Somalia. The following approaches could be considered to improve vaccine uptake to reach herd immunity.

- **Addressing vaccine hesitancy:** Effective health marketing, which is tailored to and reaches the groups targeted for vaccination, including internally displaced people and other populations in institutional care settings, should be considered as part of social mobilization. It should be noted that the 3C model of vaccine hesitancy – complacency, lack of confidence and convenience – impedes vaccination. Data may vary across countries, but permanent refusal of all vaccines is rare, typically no more than 1–2% of the population, and studies show that many people who initially refuse a vaccine eventually change their mind. Populations among whom vaccine hesitancy should be urgently addressed include those with high exposure to the virus (e.g. health care workers and patients living in institutions) and those at high risk of severe disease and death (e.g. people with noncommunicable diseases and chronic infections). A strategic communication response plan should 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.
- **Reducing the age limit:** About 70% of Somalia's population are younger than 30 years. Therefore, it is justifiable to reduce the age limit for receiving COVID-19 vaccines to even less than 30 years if a rapid

uptake is envisaged which will help achieve herd immunity. Vaccinating younger people 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 a combination of fixed vaccination posts and outreach centres can work together in settings where a population is highly mobile. Many countries have been able to rapidly convert large public spaces into vaccination hubs (e.g. places of worship like mosques, sporting venues and malls) to improve access to vaccines for eligible groups and to achieve maximum scale and efficiency.
- **Vaccinating health care workers in the public and private health sector:** Vaccinating all health care workers in the country should be a mandatory 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 vaccine has proved unsuccessful. Public health ethics support the use of less burdensome policies whenever possible before moving to stricter ones.
- **Engaging the private sector:** It is important to engage nongovernmental organizations and for-profit private health service providers in the vaccination programme. Staff of nongovernmental organizations are a priority group for receiving vaccines. As such, nongovernmental organizations managing health, education, nutrition, WASH and food, and the livelihood sector (supporting local communities with social safety net programmes) should be engaged to actively participate in improving vaccine uptake.
- **Engaging community groups:** 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 can be engaged for advocacy to ensure that as many people as possible are vaccinated as fast as possible. They can also clarify messages to counter vaccine resistance and hesitancy and spread positive information about COVID-19 vaccines. Using high-profile people, such as political leaders and social celebrities, to champion and promote COVID-19 vaccination may help improve uptake.

COVID-19 vaccination drive: an opportunity to strengthen the health system

The current COVID-19 vaccination drive is the largest one in its 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 vaccination drive needed to cover at-least 75% of the population to achieve herd immunity against COVID-19. The current estimates of the cost of vaccines to achieve this herd immunity in Somalia is about US\$ 63 457 718 of which US\$ 19 529 318 would be provided by GAVI, The Vaccine Alliance, through the COVAX facility; the country would be required to provide the remaining funds (US\$ 43 928 400). In addition to that, there would be about US\$ 83 790 000 in operational costs to be met. Therefore, the estimated total cost for Somalia to vaccinate 75% of its population would be about US\$ 147 247 718. Given this immense cost, it would be sensible to use the COVID-19 vaccination roll out to strengthen the immunization delivery systems and infrastructure required to ensure vaccine access and equity for routine immunization. Furthermore, the system built to respond to COVID-19 provides an opportunity to improve the health system and could be used beyond the current crisis for the next emergency and also for a long-lasting solution for similar future challenges. The following actions have the potential to improve areas of the health system.

- Strengthening national regulatory systems.
- Improving essential aspects of the vaccine delivery chain, including creating an environmentally friendly cold chain and high-quality and large-capacity storage infrastructure, and maintaining an efficient cold chain.
- Digitizing registration and information systems for tracking vaccines and monitoring vaccination side-effects.
- Improving waste management systems.
- Establishing effective pharmacovigilance.
- Developing an effective health communication strategy to address vaccine hesitancy for vaccination against other diseases.
- Delivering other priority mother and child health interventions combined with delivery of COVID-19 vaccines.



Conclusion: no one is safe until everyone is safe

The current wave of the pandemic in Somalia and the rest of Africa has spread more rapidly than the previous wave and affected younger and healthier populations. Somalia is unique in having large young and mobile populations, a large informal job sector, and hotspots of political instability and insecurity, all of which continue to pose challenges to vaccine roll-out strategies.

The recent news from a study (not yet peer reviewed) in England shows that one injection of the Oxford/AstraZeneca or Pfizer/BioNTech vaccine reduces coronavirus infections by nearly two thirds and protects older and more vulnerable people as much as younger, healthy individuals among the vaccinated populations. These findings demonstrate that the vaccines currently being rolled out in Somalia are effective and safe.

Having an optimal uptake of the COVID-19 vaccine will drive down rates of infection, prevent hospitalizations and deaths, and help break chains of transmission. The country has the opportunity now to stop transmission and push back the devastating impact of this pandemic on the health





and economy of the country. The African Vaccine Acquisition Task Team of the African Union and the WHO-led COVAX consortium with its global partners are striving to secure enough doses of COVID-19 vaccines to achieve 60% coverage in whole of Africa by June 2022. Somalia will fail to achieve this target without international cooperation and support, but the country has also to show its commitment by achieving a higher uptake of the vaccine either by making the current strategy fully effective or by implementing a revised strategy. This will demonstrate the country's determination to end the pandemic in Somalia and elsewhere by vaccinating and protecting everyone everywhere in the country.

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