

Improving COVID Vaccine Equity in Sub-Saharan Africa

By Clark Azubuike



Clark Azubuike is a Publication Editor at the *Africa Policy Journal*. He is currently pursuing a Master of Public Health at the Harvard T.H. Chan School of Public Health. He is

a medical doctor from Nigeria, and has worked in general practice in Nigeria and the UK at the intersection of public health and primary care services with special interest in infectious diseases. He is interested in understanding how the social determinants of health affect how people access health care services and their clinical outcomes as well as how to leverage digital technology to mitigate these gaps. He enjoys writing, reading, mini-golf and jogging in his free time. You can reach him on twitter at @ogoclark.

The best available tools for mitigating the current pandemic are the highly effective vaccines. However there has been uneven adoption of the vaccines, especially in most low- and middle-income countries, including those in Sub-Saharan Africa. Experts believe that low population vaccine uptake explains, at least in part, the increased risk for mutations in the current circulating strain of the virus, increasing the risk of the emergence of newer strains of the virus. These newer variants of the SARS Cov-2 virus have potential risk for higher transmissibility and worsened virulence. In addition to continued mortality and morbidity, the appearance of new variants

creates the risk of potential development of vaccine-resistant viruses and impedes progress in the global fight against the COVID-19 pandemic. Expanding global vaccine access equitably is a key component in the mitigation of the pandemic. I aim to explain the roots of the current global vaccine inequity and seek expansion in donations of COVID-19 vaccines to countries in sub-Saharan Africa and other low- and middle-income countries worldwide to increase global vaccination rates.

Since the 11th of March 2020, when the World Health Organization (WHO) declared COVID-19 a global pandemic, more than 5.28 million people have died from the disease, with an estimated 264 million confirmed cases reported worldwide.¹ In order to mitigate this evolving challenge, governments around the world have taken unprecedented steps to curb the spread of the disease including adopting non-pharmacological methods like lockdowns, social distancing, widespread stay at home orders, isolation of suspected cases, quarantining of confirmed cases, widespread use of face masks and health education on handwashing and environmental hygiene measures.²

Rapid invention and widespread deployment of safe and effective vaccines have proven to be the most effective solution to reducing hospitalizations and deaths from the coronavirus. Existing evidence points to the immense benefits of the available vaccines, even though the jury is still out on the efficacy and safety of the vaccines for the long term.³ As of December 2nd 2021, 8.1 billion vaccines have been administered worldwide. 44% of the world's population has been vaccinated. However, only 3.2% of

people in low-income countries have been vaccinated and 7.5% of Africans have been fully vaccinated (accounting for 245.9 million doses administered). This contrasts with high income countries who have administered 1.8 billion doses and have fully vaccinated 67.9% of the population.⁴

According to the WHO, most African countries failed to meet their commitment to vaccinate at least 10% of their populations by September 2021. This disparity in vaccine distribution portends a lot of risks for the global fight against the pandemic. These findings are consistent with data from low- and middle-income countries all over the world. It stems from a resource gap between low- and high-income countries. These countries have been unable to obtain the necessary doses needed for widespread vaccination, as the major vaccine makers have prioritized access for procurement to high income countries who are able to buy and hoard them.

In July 2021, reports indicated that the US was sitting on 26 million unused vaccines, enough to vaccinate 13.1 million people. The UK has bought 467 million doses of COVID vaccines with 170,000 doses of Moderna vaccines at risk of expiry.⁵ Similar trends have been reported in other high-income countries including France, Switzerland, Canada, Germany, and Italy.

The vaccine rollout disparities have a lot of implications for the fight against the pandemic. The emergence of potentially more virulent and highly transmissible variants of the virus are at least partly explained by mutations of the viruses in certain unvaccinated populations.⁶ The emergence of the Omicron strain (and the Beta and Delta strains before it) of the virus, first reported in Southern Africa in November of 2021, gave cause for concern because it showed unprecedented mutations on the viral genome. At the moment, other than a demonstrable and significantly increased

risk for transmissibility, the implications of this are unknown. As at the time of writing, most cases reported are mild in symptom presentation. However, it resulted in a spiral of broad measures intended to clamp down on the spread, including new lockdown measures, a regional ban on transportation, increased testing, and surveillance, as well as impacting global and local markets. Unquantified is the psychological and emotional toll the news of these variants is causing on the population.

The current modality for distributing vaccines to low-income countries relies on an inconsistent mix of donations from the COVID-19 Vaccine Global Access Facility (COVAX) vaccine-sharing scheme, bilateral deals, and donations from wealthier nations. The COVAX vaccine-sharing scheme is the most important mechanism for the distribution of vaccines to low-income countries, as it was the first and the most robust plan for increasing vaccine supplies to countries in Sub-Saharan Africa. The scheme aimed to distribute enough vaccines to protect at least 20% of the populations in 92 low- and middle-income countries. It is managed by multilateral organizations including the WHO, Gavi, and UNICEF, and is constituted of vaccine dose donations from wealthy countries (including the UK, US, France, Portugal, Australia, Sweden, Spain, Italy, Japan, UAE, Germany, New Zealand) in collaboration with pharmaceutical companies. Nevertheless, the G7 countries have bought up over a third of global vaccine supplies despite accounting for 13% of the global population. They have hoarded these vaccines and many of the doses are almost expiring.⁶

I will consider some options for mitigating these challenges. However, they are mutually reinforcing.

Wealthy countries need to fulfil their commitment to the COVAX sharing scheme and strengthen various aspects of it. COVAX

is based on a public-private partnership model that is upheld by three frameworks: risk sharing, dose sharing, and burden sharing. In June 2021, the G7 committed to donating 870 million vaccine doses to the COVAX scheme. It offered to share the risks and benefits of the vaccine development, vaccine doses, and the burden of financing COVAX and the Access to COVID-19 Tools Accelerator (ACT-A) as a whole. What the G7 and COVAX do not share is the decision-making power nor the technology and technical know-how to produce vaccines. Wealthier benefactors deliberately hoard the intellectual property around the production of vaccines, and this increases the cost of the vaccines. G7 nations can ramp up donations to low-income countries, as well as increasing the capacity of low-income countries to manufacture these vaccines locally. There are concerns about the capacity of countries to handle the logistics of manufacture, storage, and distribution of vaccines locally, and these concerns could be addressed through systems strengthening and capacity building in the medium to long term.

Secondly, a common cause for concern that has impacted vaccine uptake in sub-Saharan Africa has been vaccine hesitancy. While this issue is not unique to the region, the root cause of vaccine hesitancy in Africa stems from a history of malfeasance by pharmaceutical companies in the region.^{7,8} Measures to manage this should include open, transparent, and consistent communication of the data on the risks of vaccinations, as well as creating pathways for to hold vaccine manufacturers legally liable for adverse side effects related to the vaccine.

Understandably, pharmaceutical companies may remain unwilling to open themselves to legal liability because of the unique and unprecedented approach to clinical trial and drug regulatory compliance for the COVID vaccines. Nevertheless, a transparent conver-

sation with the public could ameliorate the concerns people in low- and middle-income countries have about long-term safety and efficacy. This will involve working with various stakeholders in the media, national and local government, and trusted community leaders who communicate the benefits of widespread vaccinations.

Finally, the G7 needs to meet their commitment to support healthcare infrastructure development in low-income countries. This is especially necessary now, as the global pandemic has revealed deep cracks in health systems worldwide, but more so in low- and middle-income countries. In 2019, the G7 nations committed to supporting primary health care in low-resource countries, however they have failed to meet their commitments in funding and implementations.^{9,10} To mitigate the vaccine inequity, G7 nations must increase funding for vaccination programs and commit to increasing vaccination rates through a myriad of measures. These would take the form of increasing donation of vaccination doses to meet the short-term vaccine windfall. It would also take the form of transfer of technical expertise and know-how to the developing countries, to create self-sufficient infrastructures for manufacturing vaccines within the region.

The COVAX scheme is a good framework within which to work. However, it must be strengthened to give low- and middle-income countries the capacities to produce vaccines domestically, both for local use and for export. Sub-regional export of the vaccines will reduce dependence of foreign donation of vaccines. Already, there are significant investments in local manufacturing of the COVID vaccines within some countries in the subcontinent including Botswana and South Africa.¹¹ This will, in addition to reducing the cost of vaccines, increase compliance, increase trust and adoption, and reduce overall public hesitancy,

as the populations in these countries view the vaccines through a lens of self-ownership.

The global vaccine roll out has been tainted by inequity and disparity, especially to the detriment of low- and middle-income countries. With the emergence of new variants that threaten the efforts to mitigate the pandemic, it is important that, now more than ever, G7 nations fulfill their commitments to increasing vaccine access and strengthening health systems in low- resource countries.

Endnotes

- 1 Reported as of 26 January 2022, the time of writing. “Coronavirus Death Toll.” n.d. Worldometer. Accessed January 26, 2022. <https://www.worldometers.info/coronavirus/coronavirus-death-toll/>.
- 2 Shen, Y, G Powell, and I Ganser. 2021, et al. “Monitoring Non-Pharmaceutical Public Health Interventions during the COVID-19 Pandemic.” *Sci Data* 8: 225. <https://doi.org/Monitoring-non-pharmaceutical-public-health-interventions-during-the-COVID-19-pandemic>.
- 3 Rosenberg, ES, DR Holtgrave, and V Dorabawila, et al. 2021. “New COVID-19 Cases and Hospitalizations Among Adults, by Vaccination Status — New York, May 3–July 25, 2021.” 70. *MMWR Morb Mortal Wkly Rep*. <http://dx.doi.org/10.15585/mmwr.mm7037a7>.
- 4 “Data Dive: The Astoundingly Unequal Vaccine Rollout.” 2022. ONE Campaign. 2022. <https://www.one.org/africa/issues/covid-19-tracker/explore-vaccines/#0>.
- 5 Goldhill, Olivia. 2021. “States Are Sitting on Millions of Surplus Covid-19 Vaccine Doses as Expiration Dates Approach.” *STAT*, July 20, 2021. <https://www.statnews.com/2021/07/20/states-are-sitting-on-millions-of-surplus-covid-19-vaccine-doses-as-expiration-dates-approach/>.
- 6 Feinmann, Jane. 2021. “Covid-19: Global Vaccine Production Is a Mess and Shortages Are down to More than Just Hoarding.” *BMJ*, no. 375 (October). <https://doi.org/10.1136/bmj.n2375>.
- 7 Egharevba, Efe, and Jacqueline Atkinson. 2016. “The Role of Corruption and Unethical Behaviour in Precluding the Placement of Industry Sponsored Clinical Trials in Sub-Saharan Africa: Stakeholder Views.” *Contemporary Clinical Trials Communications* 3 (15): 102–10. <https://doi.org/10.1016/j.conctc.2016.04.009>.
- 8 Washington, Harriet A. 2007. “Why Africa Fears Western Medicine.” *The New York Times*, July 31, 2007. <https://www.nytimes.com/2007/07/31/opinion/31washington.html>.
- 9 “Gavi Welcomes G7 Initiative on Primary Health Care.” 2019. Gavi, *The Vaccine Alliance* (blog). May 17, 2019. <https://www.gavi.org/news/media-room/gavi-welcomes-g7-initiative-primary-health-care>.
- 10 Brown, Gordon. 2021. “Despite the Grand Words, This G7 Falls Devastatingly Short on Vaccines.” *The Guardian*, June 14, 2021. <https://www.theguardian.com/commentisfree/2021/jun/14/grand-words-g7-vaccines-summit-failure-gordon-brown>.
- 11 Kew, Janice, and Antony Sguazzin. 2022. “Billionaire Soon-Shiong Launches Ibn-Dose Vaccine Plant in Cape Town.” *MoneywebNOW*, January 19, 2022. <https://www.moneyweb.co.za/news/south-africa/billionaire-soon-shiong-launches-ibn-dose-vaccine-plant-in-cape-town/>.