



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Africa CDC warns COVID-19 vaccine production could cease

A lack of demand could jeopardise manufacturing of the Johnson & Johnson vaccine in South Africa. Paul Adepoju reports.



Global inequities in access to COVID-19 vaccines, diagnostics, and therapeutics have prompted a huge push to expand local manufacture of health technologies in Africa. In March, the Africa Centres for Disease Control and Prevention (CDC) warned that less than 1% of vaccines administered on the continent are manufactured locally, reducing countries' ability to respond to pandemics and other health crises. A new plan aims to enable Africa to locally manufacture 60% of its vaccine needs by 2040. However, this plan could be undercut by a lack of demand.

An agreement to bolster manufacturing of Johnson & Johnson's single-dose vaccine was secured by South Africa-based Aspen Pharmacare in December, 2021. At a press briefing on April 14, the Africa CDC's Director John Nkengasong told journalists that countries are not ordering the vaccine. He added that if this situation continues "the risk is very, very high that the company [Aspen] may actually stop producing the J&J COVID vaccines". Nkengasong noted that countries are reluctant to pay for Aspen's vaccine doses because hundreds of millions of free doses are now widely available—with some now struggling to quickly roll out the shots before they expire. As of April 25, 16% of the African population had been fully vaccinated. Of the 760 million total doses the continent has received, nearly 507 million have been administered. He described such reluctance as short-sighted.

Under the agreement, Aspen can fill vials with vaccine supplied by Johnson & Johnson, package the vaccine doses, and sell the finished form in Africa. Strive Masiyiwa, African Union special envoy on COVID-19 and head of the African Vaccine Acquisition Trust,

which brokered the agreement with Johnson & Johnson, said the contract is for 400 million doses. "It gets us one step closer to securing Africa's future vaccine production and ensures that the gross vaccine inequality we witnessed in the early part of the pandemic is not repeated", Masiyiwa said in November, 2021. However, no African countries have so far bought doses from Aspen.

Johnson & Johnson did not comment on a potential halt to production of COVID-19 vaccines, but said that it is aware of the challenges that vaccine manufacturers are experiencing as demand for COVID-19 vaccines evolves globally. Aspen Pharmacare declined to comment.

Nkengasong said that discussions have begun with Gavi, The Vaccine Alliance, and COVAX on the possibility of ordering COVID-19 vaccine doses from Aspen Pharmacare to ensure that the facility does not suspend its COVID-19 vaccine production line. Gavi, as a co-lead of COVAX, said it "proactively supports the expansion of regional manufacturing efforts as a fundamental cornerstone of future pandemic preparedness".

Nigerian public health analyst Ifeanyi Nsofor told *The Lancet* that African countries' reluctance to buy locally produced vaccine raises concerns regarding the fate of several other COVID-19 vaccine manufacturing initiatives in Africa. "African countries have to ramp up vaccination efforts to clear these backlogs to prevent expiry of vaccines before purchasing more doses. The African Union must encourage the participation of the private sector in Africa in efforts to manufacture vaccines on the continent, and should coordinate through the African Medical Supplies Platform", Nsofor told *The Lancet*.

WHO and its partners established the first COVID-19 mRNA vaccine technology transfer hub in South Africa. Moderna plans to set up its first African mRNA vaccine manufacturing facility in Kenya. BioNTech is also setting up modular mRNA manufacturing facilities in Senegal, Rwanda, and South Africa. In Egypt, the production of the Sinovac COVID-19 vaccine is already underway, with the country's health ministry announcing plans to produce more than 1 billion doses annually. These plans are still going ahead.

Shu-Shu Tekle-Haimanot, senior advisor at The Global Fund to Fight AIDS, Tuberculosis and Malaria, noted that among the African countries that will be involved in vaccine manufacturing for COVID-19 and other diseases, there is the need to "understand economy of scale and to also create the markets for them". She said the availability of and access to aid, including access to free vaccines, might have made many African countries complacent.

For Africa's vaccine manufacturing to thrive, Nkengasong said, countries should spend more on health and not rely heavily on aid. He expects that the African epidemic fund initiative, which was endorsed at an African Union Summit in February, 2022, will help the continent to speed up this process and increase access to essential tools such as locally produced vaccines for COVID-19 and other diseases.

"It will allow for pooling of resources to respond in a timely manner when we have these outbreaks. That may not be in the billions [of dollars], but it will be something that will kickstart an emergency response once we're challenged with epidemics or outbreaks", he told *The Lancet*.

Paul Adepoju

For more on **Moderna's mRNA vaccine manufacturing plans in Kenya** see <https://www.reuters.com/business/healthcare-pharmaceuticals/moderna-build-mrna-vaccine-manufacturing-facility-kenya-2022-03-07/>

For more on **BioNTech's mRNA manufacturing in Africa** see <https://investors.biontech.de/news-releases/news-release-details/biontech-introduces-first-modular-mrna-manufacturing-facility>

For more on the **Egyptian health ministry's Sinovac vaccine manufacturing plans** see <https://www.arabnews.com/node/2000461/middle-east>

For more on the **African epidemic fund initiative** see <https://www.devex.com/news/african-union-calls-for-bolstered-health-emergency-infrastructure-102545>