



Fake COVID-19 vaccinations in Africa

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Deliveries of vaccine supplies by the COVAX programme under the WHO commenced in February 2021.¹ COVAX has proposed to distribute 520 million doses to Africa by the end of 2021.¹ On 28 March 2021, African Union member states endorsed purchasing 220 million doses of the Johnson & Johnson single shot of the COVID-19 vaccine. However, priority was given to the Johnson & Johnson vaccine to the central-most pooled procurement due to being a single-shot vaccine, being cheap and easy to administer, having good storage conditions and production of doses being within Africa, with fill-finish activities taking place in South Africa.²

Moreover, greater than half of the vaccine doses received so far in Africa have been through either direct purchases or donations. Countries such as Burundi and Eritrea are yet to receive vaccines. Burundi has expressed a willingness to receive the vaccines but states that the country will not promote the government COVID-19 vaccine.¹

In November 2020, fake COVID-19 vaccines (2400 doses of illicit vaccine in 400 ampuls hidden in plastic containers in a refrigerator) were discovered by the law enforcement agencies in Johannesburg, South Africa.³ The Germiston, South Africa, to date, is Africa's most prominent public seizure of fake COVID-19 vaccinations. African governments, police agencies and health authorities warn that it could be just the inception.

Pfizer reported that the problem is not common in Africa. However, the main concern is particularly severe on the African continent, which sees itself as

being the world's largest market for fake medications and is intensely dallying to the high-income countries in vaccinations.³ WHO disclosed that it had recognised the sham brand of India's primary COVID-19 vaccine, Covishield.⁴ Between July and August, the authorities in India and Africa have removed the doses from the market.⁴ The manufacturer of the vaccines has authenticated the counterfeit nature of the amounts.⁵

The fake COVID-19 vaccination poses a great danger to the continent of Africa. Africa is lagging in its inoculation effort and already has a low rate of vaccination juxtaposed with the rest of the world—less than 2% of the continent is completely vaccinated according to a report by the Africa Centres for Disease Control and Prevention.¹

Africa's latest tolls from the start of the pandemic to 6 September 2021 is 5 669 913 total cases and 137 488 deaths due to COVID-19.⁶ It also constitutes a great peril to global public health and places an extra burden on vulnerable populations and health systems.⁷

Resources required to receive and administer vaccines may be challenging in rural and remote areas. Unfortunately, many healthcare centres in African countries are deprived of personnel equipment and stable power supply, which can hinder vaccine storage. Such hardships and an unequal global distribution of COVID-19 vaccines can act as fuel for the trading of fakes in Africa. The lack of local production and reliance on imports provide a perfect opportunity for criminals to profit.

Fake COVID-19 vaccines can result in long-term health conditions and fatal consequences. Usage of counterfeit vaccines can make it challenging for the world to reach herd immunity. It is known that some African countries reported low COVID-19 acceptance rates, and the rise of fake vaccines can potentially undermine confidence, which can lead to COVID-19 vaccine hesitancy and aggravate the observed poor uptake. Simulated vaccine distribution can lead individuals to a false sense of security with being 'fully' vaccinated. This phenomenon can negate vaccination efforts and increase the risk of

exposure. It is important to note that fake vaccines are also endangering those individuals who are immunocompromised.

Global efforts have been made to reduce or limit the distribution of fake vaccines. The action taken by the Global Steering Committee for Quality Assurance of Health Products (GSC) to protect health supply chains is a prime example. GSC formed a COVAX Traceability Advisory Council, composed of leading COVID-19 vaccine manufacturers, providers of technological solutions and other regulatory bodies for medicine. The COVAX Traceability Advisory Council aims to create a system that authenticates and verifies vaccines distributed in countries.⁸ Verification methods include the use of the GS1 labelling format that allows for tracking and tracing throughout a supply chain, thus increasing the ability to identify false vaccines and intervene when necessary.

Labelling logistics, communication and timely information sharing have been crucial in combating against the successful delivery of fake vaccines to Africa. Before seizing the fake COVID-19 vaccines in South Africa, The International Criminal Police Organization issued an Orange Notice warning law info to prepare for organised crime networks that would target COVID-19 vaccines both digitally and among many populations.⁹ This alert outlined details of authorised and genuine vaccines and shipping methods that were supplied by pharmaceutical companies for the identification of fake vials. At a national level, it has been suggested that countries take on board the use of track and trace that pharmaceutical companies supply, or the activity of vaccine use in medical and other relevant environments.

Detection and removal of counterfeit products from circulation to mitigate harm to patients is imperative. A call for upsurge surveillance within the supply chains of countries and regions likely to be affected by these falsified products, which encompass hospitals, clinics, health centres, wholesalers, distributors, pharmacies and suppliers of medical products, is needed. All medical products must be obtained from authorised/licensed suppliers and the validity and physical state of all medical products must be meticulously scrutinised. All COVID-19 vaccine brands must be endorsed by regulatory bodies as safe and potent. Suggested efforts can ensure vaccine authenticity. It is recommended that better arrangements be made for the disposal of COVID-19 vaccine waste.

Also, community leaders should be instated as reporters for vaccine efforts. Should they receive information that

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fake vaccines are being administered in remote and rural locations, these community leaders can report to health officials. The influence of community leaders can help raise public awareness. Community leaders are often respected by the local population and would have the trust of the community. Community leaders could help influence vaccinations while also keeping fake vaccinations out of their community.

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Acknowledgements We are thankful to Dr Dattatreya Mukherjee for sharing insight on this project and Dr Oko Christian for reviewing the paper.

Contributors All authors contributed equally to the drafting of this letter.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; internally peer reviewed.

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To cite Aborode AT, Awuah WA, Talukder S, et al. *Postgrad Med J* 2022;**98**:317–318.

Received 9 September 2021
Accepted 7 November 2021
Published Online First 23 November 2021

Postgrad Med J 2022;**98**:317–318.
doi:10.1136/postgradmedj-2021-141160

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REFERENCES

- 1 Covid-19 Africa: What is happening with vaccine supplies? BBC News [Internet], 2021. Available: <https://www.bbc.com/news/56100076> [Accessed 1 Sep 2021].
- 2 Africa announces 400m vaccine doses to the African Union Member States and the Caribbean - World [Internet]. ReliefWeb. Available: <https://reliefweb.int/>

- report/world/africa-announces-rollout-400m-vaccine-doses-african-union-member-states-and-caribbean [Accessed 1 Sep 2021].
- 3 Fake Covid-19 Vaccines Pose New Threat in Africa - WSJ [Internet]. Available: <https://www.wsj.com/articles/fake-covid-19-vaccines-pose-new-threat-in-africa-11622971955> [Accessed 1 Sep 2021].
- 4 Mukherjee D, Maskey U, Ishak A. Fake COVID-19 vaccination in India: an emerging dilemma? *Postgrad Med J* 2022;**98**:e2.
- 5 Covishield: WHO flags fake jabs in India, Africa - BBC News [Internet]. Available: <https://www.bbc.com/news/world-asia-india-58253488> [Accessed 1 Sep 2021].
- 6 Coronavirus (COVID-19) | WHO | Regional Office for Africa [Internet]. Available: <https://www.afro.who.int/health-topics/coronavirus-covid-19> [Accessed 6 Sep 2021].
- 7 WHO alerts to fake COVID-19 vaccines as FG receives more doses, begins vaccination | The Guardian Nigeria News - Nigeria and World News — Nigeria — The Guardian Nigeria News – Nigeria and World News [Internet]. Available: <https://guardian.ng/news/who-alerts-to-fake-covid-19-vaccines-as-fg-receives-more-doses-begins-vaccination/> [Accessed 2 Sep 2021].
- 8 Fighting fake COVID-19 Vaccines – a key pandemic-ending goal [Internet]. Available: <https://blogs.worldbank.org/health/fighting-fake-covid-19-vaccines-key-pandemic-ending-goal> [Accessed 7 Sep 2021].
- 9 Fake COVID vaccine distribution network dismantled after INTERPOL alert [Internet]. Available: <https://www.interpol.int/en/News-and-Events/News/2021/Fake-COVID-vaccine-distribution-network-dismantled-after-INTERPOL-alert> [Accessed 7 Sep 2021].