

Scientists call on AU leaders to prioritise mRNA vaccine technology

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Covid-19 mRNA vaccine production platform. Pharmaceutical manufacture background. Macro scene of automatic conveyor line AFP

By [Angela Oketch](#) Health and Science reporter Nation Media Group

Leading scientists are calling upon African Union (AU) leaders to prioritise mRNA vaccine technology transfer projects that are about equity, public purpose, and the open sharing of knowledge and technology rather than supporting big pharma-backed projects. Nation. Africa had a sit-down with three international experts to understand whether the big pharma projects are aimed at undercutting the WHO and Medicines Patent Pool mRNA technology transfer programme.

Quarraisha Abdool Karim, Professor of Clinical Epidemiology at Columbia University (Mailman School of Public Health)

What steps should AU governments be taking to prepare for future health crises?

After waiting far too long for vaccines and treatments in the Covid-19 pandemic, African Unions leaders need to say, “Never again”. Africa cannot rely on solidarity from rich countries or charity from pharmaceutical companies.

Also read: [Clinical trials underway for HIV vaccine candidate](#)

We need a sustainable supply of affordable health products produced on our continent. That requires national and regional leadership – and investment in regional manufacturing, research, and development. However, manufacturing requires

strategic actions from African governments and the African Union. AU leaders need to prioritise initiatives which foster the transfer of technology and know-how. This will build local skills and knowledge, helping to establish African pharmaceutical manufacturing capacity in a way that centres public health. That is the way to ensure our collective health security.

Which programmes should be prioritised?

Programs that are based on public health needs should be prioritised. The mRNA Technology Transfer program based in South Africa and backed by the WHO is a prime example. The mRNA technology is shared with partners in Kenya, Senegal, Nigeria, Tunisia, and Egypt, as well as in nine other low and middle-income countries. Afrigen in South Africa has already developed an mRNA Covid-19 vaccine prototype and is conducting research beyond Covid-19, on TB and HIV. But, unlike pharmaceutical companies, the technology and knowledge will be shared with all the network manufacturers.

It is initiatives like this, which prioritise public health, equitable access, and the sharing of knowledge and technology, that should be prioritised and supported.

Why do you think this model is preferable to bilateral procurement from pharmaceutical companies?

Multi-lateral arrangements are always preferable to bi-lateral. This applies equally in the context of vaccine manufacturing as it does to vaccine purchasing.

We have seen how the lack of bargaining power in low and middle-income countries translates to pharma companies running roughshod on the terms and conditions of bilateral arrangements.

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A good example is how the Johnson and Johnson plant producing Covid-19 vaccines in South Africa through Aspen using their export permit that was signed to ship products to other African countries was used instead to ship vaccines to Europe.

It's highly likely that these bilateral arrangements become "in a location only" or "in name only" manufacturing capacity in low and middle-income countries resulting in trust at all levels getting eroded fast and importantly local/national access getting compromised.

Multilateral can sometimes mean that there is a guaranteed market as well. Although this isn't part of the WHO Hub it can avoid the white elephants which is why I think the Africa CDC Partnerships for African Vaccine Manufacturing established under Dr John Nkengasong's leadership, was so clever.

It was a Public-Private partnership that sought to address many of the difficulties with African vaccine manufacturing. It underscores that there isn't a 'one size fits all approach' but rather the solution must be more "homegrown". The WHO hub is a great opportunity and strategy but its success is dependent on all member states participating because if participation is voluntary (as it is) then it could be skewed towards those countries or companies who have the power to change the status quo opting out of the initiative.

Professor Francois Venter Executive Director of Ezintsha, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg.

What more can Africa Union governments do to support African manufacturing efforts?

AU governments need to commit to procuring vaccines from African manufacturers. Clearly, the cost of setting up production would make the products locally produced in Africa more expensive than those imported from existing suppliers.

But sustainable supply for years to come is worth the short-term cost.

To ensure a sustainable supply of medical products, we need to build a thriving African pharmaceutical industry. This requires assuring manufacturers of actual demand through political and financial commitment from AU leaders and global agencies that procure vaccines.

The commitment must be for the long term until producers can gain the volume and expertise needed to make efficiencies and decrease prices. AU governments also need to support their local researchers more actively, so that they remain inside Africa. At the moment, it is easy for rich countries to lure our most talented people away, as there is no career path locally.”

With every emerging or new disease, we have more evidence that pharmaceutical companies fight hard to protect their monopoly on technology, know-how, and intellectual property, so they can control, supply, distribution, and price. Therefore, projects based on sharing technology and enabling production in low and middle-income countries, like the WHO-backed mRNA Technology Transfer Programme, will be in particular need of political, commercial, and financial support.

Dr Charles Ebikeme, Visiting Fellow, Department of Health Policy, London School of Economics & Political Science

What do you think of pharmaceutical companies’ African manufacturing activities, like Moderna’s planned site in Kenya or BioNTech’s container-ship mRNA factories in Rwanda and Senegal?

The key is in the word “local”. Africa needs LOCAL vaccine manufacturing so any vaccine manufacturing in the continent is an improvement. But we have reason to be sceptical – where was this progress during the pandemic? African leaders should remember that, during the COVID-19 pandemic, pharmaceutical companies ignored the health needs of Africans and focused on selling high-priced doses to the richest countries. That made them enormous profits.

It was only after a huge public campaign against vaccine apartheid that Moderna and BioNTech announced that they would set up production facilities in a few African countries. Africa could not rely on other Global South vaccine manufacturers during the pandemic.

At the height of the Delta variant outbreak in early 2021, India halted vaccine exports to Africa. So LOCAL is very much key. Questions need to be asked about the Big Pharma-backed projects. What technology will they transfer to Africans? Are they actually training local people in the end-to-end manufacturing process? What will happen with the doses produced? Will any or all of the doses produced be reserved for African countries? What price will they charge the countries where doses are produced?

And, crucially, these announcements came after the WHO announced the technology transfer programme. From its conception, Moderna, Pfizer, and BioNTech have

refused to cooperate with the programme, ignoring repeated requests for technology transfer.

“We must ask: is this an attempt to undercut the WHO-backed mRNA Technology Transfer Programme? The value of the total African vaccine market could reach between \$3 billion and \$17 billion by 2040 according to some estimates. Leaders need to ensure that such a local African vaccine market is sustainable for African countries themselves, and this does not become another case where value is extracted out of the continent for private profit”.