Technology, intra-continental trade key to effective Covid-19 vaccination rollout

By Praba Moonsamy

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As countries across Africa roll out vaccines to combat the ongoing COVID-19 pandemic, it is becoming increasingly evident that the continent is in desperate need of ICT systems and healthcare solutions that can support mass vaccination programmes.

Image source: Gallo/Getty

Unfortunately, African countries are often seen by First World countries as dumping grounds for outdated or substandard technology, with equipment that is prohibited in Europe, due to regulatory issues, being resold on the continent.

Aside from being outdated or substandard, imported medical technology seldom meets the requirements of African countries and their populations. In most instances, imported medical technology must be customised and adapted. Furthermore, the adoption of such technology creates an undesirable dependence on outside skills and resources, which often becomes too expensive to sustain in the long term.

Hence, there is a growing demand and hunger in Africa to build homegrown skills and resources, which in turn highlights the need for intra-continental trading and partnerships that will enable the sharing of ICT technologies to help the continent manage the COVID-19 pandemic.

However, intra-continental trading in Africa is still relatively new as the continent was historically divided up into trade blocs. Countries within these blocs have a lot of administrative regulations and financial barriers that need to be overcome in order to facilitate effective intra-continental trade.

Nearer destinations

While African governments are looking at ways to remove these barriers, it is taking a long time. In the meantime, these government have been too focused on sourcing specialised goods and services from Europe, Asia and the USA, often not realising that these can be easily sourced from nearer destinations.

This is particularly significant as Africa's public healthcare systems are beleaguered by a shortage of resources, including infrastructure, facilities, skills and staff, at a time when numerous countries are planning to roll out mass vaccination programmes.

Therefore, it is key for these healthcare systems to prioritise their technology investments, or risk being left behind. The right technology can significantly improve healthcare efficiency, while also addressing the topographical and geographical challenges of remote clinics and healthcare facilities.

Additionally, the evolutionary nature of ICT means that modern medical technology can overcome many of the challenges encountered in parts of the continent, such as a lack of power infrastructure, stable electricity supply and well-developed ICT and telecommunication networks.

For example, modern technology allows companies to supply solar-powered fridges to underdeveloped areas, enabling medical facilities to store medicines until they need to be distributed, without having to rely on electricity infrastructure and supply. This is especially crucial for the storage, monitoring and distribution of Covid-19 vaccines.

Temperature is key

Temperature is a key process variable for storing Covid-19 vaccines, as this medication has to be kept at the right temperature, or it will lose its efficacy and become useless. There are companies on the continent that specialise in the remote temperature monitoring of healthcare and pharmaceutical products, as well as cold storage. These solutions are readily available to healthcare systems across Africa.

Modern temperature monitoring systems no longer consist of placing a thermometer in a box of vaccines and relying on someone to take temperature readings a few times a day. Modern systems are proactive and rely on sensors to automatically take temperature readings every few minutes, ensuring that if a potential breach of pre-programmed parameters is about to happen an alert is sent via email or SMS so that corrective action can be taken.

Whether a small single-sensor application or a larger and more complex installation, modern temperature monitoring systems rely on Wi-Fi sensors to automatically communicate information to a cloud-based platform where this data is stored and analysed. Temperature monitoring data is needed for regular reporting and audit purposes, enabling facilities to prove that they complied with prescribed standards.

The biggest impact of this technology is minimising wastage, especially that there is a shortage of vaccines across the globe. A breach of temperature conditions means that vaccines can't be used and have to be disposed of, which is probably the worst thing that can happen.

African governments must realise that there is excellent technology development taking place on the continent, eliminating the need to look to overseas markets. Local medical technology solutions are flexible and adaptable to local conditions and can go a long way to enabling effective vaccination programmes.

ABOUT THE AUTHOR

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