VACCINE NATIONALISM AND THE ACCESS OF LOW-INCOME COUNTRIES TO COVID-19 VACCINES: THE NIGERIAN EXPERIENCE

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Abstract

The outbreak of infectious diseases in the last century has necessitated the development of vaccines, and arrangement for access to vaccines to overcome the outbreak. The outbreak of COVID-19 in December of 2019 put the entire international community on a clock to develop a vaccine and to make same available to as many individuals as possible across the world within the shortest possible time, regardless of where they live. The development of vaccines requires important and expensive human capital, infrastructure for manufacturing, transportation, and storage such as reliable cold chains and power grids. These are facilities which come easily to developed nations but are unavailable or least available to developing and underdeveloped countries. This paper reviews Nigeria's vaccine manufacture capacity, steps being taken by the country to access vaccines manufactured abroad and its COVID-19 vaccination campaign; discusses the challenges posed by the lack of capacity to

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manufacture vaccines locally; paucity of funds to purchase vaccines manufactured abroad and the impact of multilateral and bilateral arrangements on these processes. The paper makes recommendations on actions the country and other African countries can take to mitigate or remove these challenges posed and ensure vaccine independence, thereby improving preparedness for future pandemics.

KEYWORDS: *Vaccine Nationalism, Access to Vaccines, Low-Income Countries.*

Introduction

The COVID-19 outbreak was first reported from Wuhan, in Hubei province, China, in December 2019. It was declared a pandemic in March 2020. As of 7th October 2021, there were 236,132,082 confirmed cases while there has been more than 4,822,472 deaths and a total of 6, 262,445,422 vaccine doses had been administered according to the WHO.[869] The outbreak has affected every sphere of life from global commerce to education, employment, and travel.

Response to pandemics usually take the form of public health guidelines and non-pharmaceutical interventions, in the long and short term and the need to innovate on pharmaceutical interventions such as vaccines. This was the case during the H1N1, Swine flu, and Ebola Virus Disease outbreaks and currently the COVID-19 pandemic's interventions.

[869]WHO Coronavirus (COVID-19) Dashboard, <WHO Coronavirus (COVID-19) Dashboard | WHO Coronavirus (COVID-19) Dashboard With Vaccination Data> accessed 8 October 2021

Pharmaceutical and non-pharmaceutical interventions involve cost and logistics which in most cases overwhelm poor countries both financially and institutionally.

Again, in the race to contain outbreaks, countries go all out in a bid to protect their populations. This can take the form of protectionism approaches to non-pharmaceutical interventions such as hoarding personal protective equipment (PPEs), facemasks, sanitisers of all kinds and eventually vaccines as soon as one is finally approved for use in populations. At the onset of the COVID-19 pandemic outbreak, non-pharmaceutical interventions were a matter of which countries could manufacture the necessities and whether there was enough in the source countries before shipping to countries unable to manufacture. Several countries including Nigeria overcame the need to import these supplies as the pandemic raged on. At the arrival of the news of the development of vaccine candidates for the coronavirus, it was greeted with much hope by countries within the World Health Organisation (WHO). However, this was soon replaced by anxiety regarding capacity to manufacture and store these vaccines for immunisation. A few countries made efforts to secure access to the vaccine even before they were available for testing. The push has been termed 'vaccine nationalism'.[870] Vaccine nationalism has been defined as the effort by countries to prioritise their domestic needs at the expense of others'[871].More

[870] Harry Kretchmer, Vaccine Nationalism – and how it could Affect us all'<Coronavirus: What is vaccine nationalism, how it affects us? | World Economic Forum (weforum.org)> accessed 10 October 2021

[871] Yasmeen Serhan, 'Vaccine Nationalism is Doomed to fail' The Atlantic(8 December 2020) <Vaccine Nationalism Is Doomed to Fail - The Atlantic> accessed 8 October 2021

importantly, the vaccine is seen in many quarters as more effective in curbing the impact of the pandemic when compared with non-pharmaceutical interventions such as hand washing, sanitising, face coverings, and social distancing.[872]

Vaccine nationalism notionally is not novel.[873] According to David Fidler, vaccine nationalism is indeed 'business as usual' in global health work.[874] When the 2009 H1N1 influenza pandemic raged, there was no cooperation in international health work, as prosperous countries acquired preventive vaccines before it was made available to low-income countries. This was also the case with vaccines for small pox, polio and medications for HIV/AIDS.[875] This apparent indifference to the need of pharmaceutical and non-pharmaceutical interventions availability in developing and low-income countries led to countries such as China and India into taking bold, efficient steps to rise above the challenge of dependency during pandemics.[876] In the current pandemic of COVID-19, China and India remain important sources of vaccines to multilateral and bilateral arrangement for acquisition of vaccines against the virus. Unfortunately, in the

[872] Olufunmilayo Habibat Obadofin, Improving Cold-Chain Capacity for Vaccine Distribution in Nigeria'<Improving cold-chain capacity for vaccine distribution in Nigeria — Features — The Guardian Nigeria News – Nigeria and World News> accessed 8 October 2021

[873]Harry Kretchmer, Vaccine Nationalism – and how it could Affect us all'<Coronavirus: What is vaccine nationalism, how it affects us? | World Economic Forum (weforum.org)> accessed 10 October 2021

[874]David Fidler, Vaccine nationalism's Politics'<Vaccine nationalism's politics (science.org)> accessed 10 October 2021

[875] David Fidler, Vaccine nationalism's Politics'<Vaccine nationalism's politics (science.org)> accessed 10 October 2021

[876] David Fidler, Vaccine nationalism's Politics'<Vaccine nationalism's politics (science.org)> accessed 10 October 2021

case of the COVID-19 outbreak, the 'business as usual' attitude is still the practice among developed countries. The scale of the outbreak of Covid-19 led to the establishment of COVAX.[877] However, without a commitment from the developed countries who indeed will make donations under the collaboration and follow access schedules to ensure equitable and effective distribution of the vaccines – COVAX is doomed to either fail or make minimal impact in improving access of low-income countries to the vaccines needed to roll back the outbreak and open up their fledgling economies. A map below shows the impact of bilateral arrangements by developed nations on vaccine availability.

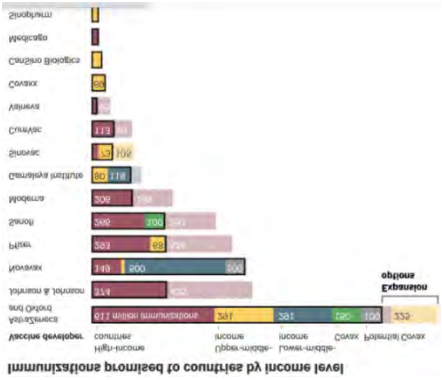

Figure 1[878]

[877] COVAX - COVID-19 Vaccines Global Access; It is the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator. The ACT Accelerator is a ground-breaking global collaboration to accelerate the development, production, and equitable access to COVID-19 tests, treatments, and vaccines<COVAX (who.int)>accessed 24 July 2022

[878] Image by new York times cited in Harry Kretchmer, Vaccine Nationalism – and how it could Affect us all'<Coronavirus: What is vaccine nationalism, how it affects us? | World Economic Forum (weforum.org)> accessed 10 October 2021

From the above chart of vaccine availability, it is apparent that even if COVAX can acquire all the vaccines available to it, without the participation and indeed donation of excess vaccines in the control of developed nations, low-income countries dependent on the facility will not access the vaccine in enough time to roll back the disruptions caused by the pandemic. More importantly, even if the developing nations were somehow able to access funding to buy more vaccines, there are less vaccines available for purchase because the manufacturers are tied down by the huge demands already placed on them by the developed nations in their quest to provide for their populations first.

Vaccine nationalism has the potential to delay or completely upend international, regional, and national efforts and campaigns and cause a situation where low-income countries like Nigeria are unable to access vaccine for their teeming populations; a situation that COVAX was created in the first place to avoid.[879] As at January, 2021 when Canada had administered about 570,000 doses of COVID-19 vaccine, only one country in Africa – Guinea – had administered 25 doses of the vaccine.[880]

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[879]Akindare Okunola, COVID-19 vaccine nationalism Puts World on Brink of 'Catastrophic Moral failure': WHO Chief' Global Citizen January 18 2021<COVID-19 Vaccine Nationalism Puts World on Brink of 'Catastrophic Moral Failure': WHO Chief (globalcitizen.org)> accessed 8 October 2021

[880]Akindare Okunola, COVID-19 vaccine nationalism Puts World on Brink of 'Catastrophic Moral failure': WHO Chief' Global Citizen January 18 2021<COVID-19 Vaccine Nationalism Puts World on Brink of 'Catastrophic Moral Failure': WHO Chief (globalcitizen.org)> accessed 8 October 2021; COVID-19 Vaccination in Canada <https://health-infobase.canada.ca/covid-19/vaccine-administration/>accessed 24 July, 2021

This paper is divided into five parts. The first part being the introduction, part two will give an overview of Nigeria's vaccine capacity both with regards to manufacture, storage and administration. Part three will review international and regional arrangements/agreements for vaccine access and Nigeria's relationship and role in these arrangements, while part four will chart a path towards amelioration of the factors impeding vaccine security for Nigeria and its African counterparts, and part five is the conclusion.

Overview of Nigeria's Vaccine Capacity

Nigeria currently lacks capacity to produce human vaccines. This has not always been so. Between 1940 and 1991, Nigeria was manufacturing a few human vaccines in export quantities and quality.[881] The then Federal Vaccine Production Laboratory, Yaba, Lagos, Nigeria was manufacturing large quantities of routine vaccines against smallpox, rabies, and yellow fever even for export to neighbouring African countries such as Cameroon, Central Africa Republic, and a few other countries within West Africa.[882] In order to restart production, the Federal Government shut down the Laboratory in 1991, to reactivate and upgrade facilities which never materialised till date. Instead of reactivating and upgrading the existing facility as planned by the administration in power at the time, another administration in

[881]Ayodamola Owoseye, Nigeria's vaccine Production Centre remains comatose despite govt assurances' the premium times (December 24 2017<Nigeria's vaccine production centre remains comatose despite govt assurances | Premium Times Nigeria (premiumtimesng.com)> accessed 11 October 2021

[882]Ayodamola Owoseye, Nigeria's vaccine Production Centre remains comatose despite govt assurances' the premium times (December 24 2017<Nigeria's vaccine production centre remains comatose despite govt assurances | Premium Times Nigeria (premiumtimesng.com)> accessed 11 October 2021

2005 incorporated the Biovaccines Limited as a special company to restart vaccine production in Nigeria under a joint venture agreement between the Federal government of Nigeria and May and Baker Plc to start local manufacture of vaccines at the Yaba facility.[883]Within this new agreement, the Federal Government retains 49 percent of the shareholding while May and Baker Plc will hold 51 percent.[884]The new arrangement was supposed to provide technology for building and developing national capacity for research and local manufacturing of basic vaccines needed by the country to increase immunisation and mitigate reliance on vaccine importation.[885]Also, under this joint venture, the Federal Vaccine Production Laboratory was to be resuscitated in collaboration with the Federal Ministry of Health (FMoH) and the National Primary Healthcare Development Agency (NPHDA) to enable the production of affordable vaccines for the country and its immediate African neighbours.[886]

Unfortunately, the arrangement made under the joint venture agreement did not materialise. However, it was revived through a Memorandum of Understanding (MoU) which was ratified by the

[883]Yusuff Moshood, vaccine Production, Nigeria's Rocket Science'<Vaccine production, Nigeria's rocket science - Healthwise (punchng.com)> accessed 11 October 2021

[884]Editorial, Reviving Vaccine Production in Nigeria' vanguard (24 January 2021) <Reviving vaccine production in Nigeria - Vanguard News (vanguardngr.com)> accessed 11 October 2021

[885]Editorial, Reviving Vaccine Production in Nigeria' vanguard (24 January 2021) <Reviving vaccine production in Nigeria - Vanguard News (vanguardngr.com)> accessed 11 October 2021

[886] Editorial, Reviving Vaccine Production in Nigeria' vanguard (24 January 2021) <Reviving vaccine production in Nigeria - Vanguard News (vanguardngr.com)> accessed 11 October 2021

Federal Executive Council (FEC) and executed in 2017.[887] Under the MoU, Bio Vaccines Nig. Ltd was authorised to again, do what it was indeed created to do – 'build local manufacturing capacity, develop a research and development centre for vaccines and commence local production of vaccines,' by 2019 this time around.[888]At the time the MoU was signed, the vaccines in view were, tetanus, BCG[889] vaccine, inactivated polio vaccine (IPV), human papillomavirus vaccine (HPV), yellow fever vaccine (YFV), hepatitis B vaccine (HBV), and measles-rubella vaccine (MRV), some of which were vaccines manufactured in the country in the not too distant past.

The prevarication and constant change in focus and policy thrust continues to hamper the ability of government policies to turn into real progress. The not-so-appropriately justified shutdown of a vaccine manufacturing plant, the lack of political will to continue a plan to revitalise and upgrade the vaccine manufacturing capacity, and the complete introduction of a new joint venture agreement all go to show how successive administrations in Nigeria have handle medical governance. This in turn makes a mockery of laws and policies that are otherwise

[887]Yusuff Moshood, vaccine Production, Nigeria's Rocket Science'<Vaccine production, Nigeria's rocket science - Healthwise (punchng.com)> accessed 11 October 2021

[888]Yusuff Moshood, vaccine Production, Nigeria's Rocket Science'<Vaccine production, Nigeria's rocket science - Healthwise (punchng.com)> accessed 11 October 2021

[889] BCG or **bacille Calmette-Guerin**, is a vaccine for tuberculosis (TB) disease. Many foreign-born persons have been BCG-vaccinated. BCG is used in many countries with a high prevalence of TB to prevent childhood tuberculous meningitis and miliary disease<https://www.cdc.gov/tb/publications/factsheets/prevention/bcg.htm>accessed 24 July 2021

elegantly passed and well intentioned, leading to a complete comatose sound initiatives that should better the lives of the citizenry. Until there is a cultural change from this lack of focus and continuity, policies and enabling laws and business arrangements will make for nothing, or much worse, lead to a waste of meagre resources.

Access to COVID -19 Vaccine

Vaccination for COVID-19 began in the developed world in mid-2020, however, vaccination for African countries did not begin until 10 January 2021 when Seychelles administered the first dose on the continent from a gift of 50,000 doses of the China Sinopharm vaccine donated by the United Arab Emirates Government.[890] The first vaccines under the WHO's COVAX facility on the continent were received by Ghana.[891] The shipment consisted of 600,000 doses of the AstraZeneca vaccines.[892] Across Africa, vaccination campaigns went into full gear with the vaccines received under COVAX, AVATT and other bilateral arrangements. As of 8th October 2021, 49 African countries had

[890]Jehran Naidoo, 'Seychelles Becomes the first African Country to roll out COVID-19 Vaccine' <Seychelles becomes first African country to roll out Covid-19 vaccine (iol.co.za)> accessed 8 October 2021

[891]Stephanie Busari and Eric Cheung, Ghana Becomes the Country to receive COVID Vaccine Through COVAX Program'<Ghana becomes first country to receive Covid-19 vaccine through COVAX program - CNN> accessed 8 October 2021

[892] Stephanie Busari and Eric Cheung, Ghana Becomes the Country to receive COVID Vaccine Through COVAX Program'<Ghana becomes first country to receive Covid-19 vaccine through COVAX program - CNN> accessed 8 October 2021

received vaccines under COVAX, 47 countries through bilateral arrangement and 31 countries through AVATT.[893]

Nigeria, the most populous African country received its first batch of COVID-19 vaccines under the COVAX facility on 2ndMarch 2021.[894] This initial shipment was made up of 3.9 million doses of the AstraZeneca COVID-19 vaccine from the Serum Institute of India.[895] The use of the vaccine received on 2nd March began on 5th March 2021, marking the beginning of COVID-19 vaccination in Nigeria.

After its vaccination campaign was well under way with the earlier received batch of doses from COVAX, Nigeria received batches of COVID-19 vaccines from a few countries and programmes. The United States donated 4 million doses of Moderna vaccine through COVAX, 177,600 doses of single shot Johnson and Johnson vaccine was purchased from the African Vaccine Acquisition Trust (AVAT), an initiative of the African Union and 1,292,640 doses of AstraZeneca vaccine alongside safety boxes and syringes donated by the United Kingdom[896].

[893] Africa CDC, Africa CDC Vaccine Dashboard, <COVID-19 Vaccination – Africa CDC> accessed 8 October 2021

[894]Leon Usigbe, Nigeria: COVID-19 Vaccine Rollout Kicks Off in Africa's most Populous Country', Africa Renewal (6 April 2021) <Nigeria: COVID-19 vaccine rollout kicks off in Africa's most populous country | Africa Renewal> accessed 8 October 2021

[895]Leon Usigbe,Nigeria: COVID-19 Vaccine Rollout Kicks Off in Africa's most Populous Country', Africa Renewal (6 April 2021) <Nigeria: COVID-19 vaccine rollout kicks off in Africa's most populous country | Africa Renewal> accessed 8 October 2021

[896]PATH, What is the Vaccine Cold Chain, <Everything you need to know about the vaccine cold chain | PATH> accessed 8 October 2021

These supplies enabled the start of the second phase of vaccinations across the country.[897]

Cold Chain Capacity (Storage/Transport)

An important component of vaccine rollout in any given health care system is cold chain capacity. Cold chain has been defined by the WHO as a series of links designed to preserve vaccines within WHO recommended temperature ranges, from the point of creation to the point of vaccination.[898]Cold chains are made up of storage and transportation equipment such as cold rooms, refrigerators, freezers, cold boxes, and vaccine carriers that comply with WHO prescribed performance standards.[899]

Vaccines are biological products, and as such require protection from light, heat, cold or freezing to ensure they retain potency throughout the value chain as they travel from manufacturer to administration.[900] Vaccine quality is maintained using a cold chain that adheres to prescribed temperature requirements.[901]Generally, vaccines as biological creations require extreme cold temperatures at first innovation. Improving temperature requirements in vaccines takes time and that is one thing COVID-19 did not give manufacturers as it needed to reach

[897] Kenni Ndili, Nigeria: Now we have more COVID-19 Vaccines in Nigeria- Time to Deliver' <Nigeria: Now We Have More Covid-19 Vaccines in Nigeria - Time to Deliver - allAfrica.com> accessed 8 October 2021

[898] WHO, The vaccine Cold Chain, <IIP2015_Module2.pdf (who.int)> accessed 8 October 2021

[899]Unicef, what is a Cold Chain'<What is a cold chain? | UNICEF Supply Division> accessed 11 October 2021

[900]PATH, What is the Vaccine Cold Chain, <Everything you need to know about the vaccine cold chain | PATH> accessed 8 October 2021

[901]PATH, What is the Vaccine Cold Chain, <Everything you need to know about the vaccine cold chain | PATH> accessed 8 October 2021

administrators as soon as possible. This meant that countries with established and reliable cold chains and power grids will most benefit from the vaccines before versions requiring less temperature regimen are manufactured. This is where health equity becomes an issue with cold chain in the vaccine value chains. This was the reason why AVAT chose to manufacture the Johnson and Johnson vaccine under the initiative as it required less levels of temperature to preserve the vaccine.

Historically, cold chain capacity has been lacking in Nigeria. According to Ophori *et al,* this is due to focus on polio eradication, which is more dependent on freezers; poor maintenance of existing cold chain equipment; and poor management of cold chain equipment.[902]They further posited in their study that 47 percent of cold chain equipment in the federating states were broken down and some supplied (donated) equipment have yet to be installed.[903] The general culture of lack of maintenance for public infrastructure must be surmounted for Nigeria to rise above its poor emergency and response capacity, as existing or already acquired important equipment are left to waste away unused.

Low-income countries like Nigeria in most cases have unreliable power grids incapable of supporting vaccination campaigns

[902]Endurance Ophori et al, CurrentTrends in immunisation in Nigeria: prospects and Challenges' Tropical Medicine and Health Vol. 42 No. 2,2014,67-75 <tmh-42-67.pdf (nih.gov)> accessed 8 October 2021

[903] Endurance Ophori et al, Current Trends in immunisation in Nigeria: prospects and Challenges' Tropical Medicine and Health Vol. 42 No. 2,2014,67-75 <tmh-42-67.pdf (nih.gov)> accessed 8 October 2021

requiring extreme temperatures for storage and distribution.[904] This meant that they must wait for versions needing less extreme temperature storage requirements. Even when they do have these storage facilities, they are too few and far behind to be of significant use to an effective vaccine campaign in a pandemic that is not age specific like the COVID-19 pandemic.

COVID-19 Vaccine Rollout Mechanism

Unlike what obtained in the past regarding vaccination where health workers were dispatched across the country to schools, religious centres and homes, COVID-19 vaccination is currently restricted to persons 18 years of age and above who must register through an electronic platform to get vaccinated.[905] Vaccines are dispatched to state health facilities pre-qualified for storage capacity. State and local vaccine accountability officers were appointed to monitor management and utilisation of these vaccines and withdrawal where expiration occurs for proper disposal.[906] The COVID-19 vaccination campaign commenced in phases with health care workers prioritised. The electronic databased utilised for preregistration is also used to track recipients of first doses to ensure that they are reminded to return

[904] PATH, What is the Vaccine Cold Chain, <Everything you need to know about the vaccine cold chain | PATH> accessed 8 October 2021

[905] Leon Usigbe, Nigeria: COVID-19 Vaccine Rollout Kicks Off in Africa's most Populous Country', Africa Renewal (6 April 2021) <Nigeria: COVID-19 vaccine rollout kicks off in Africa's most populous country | Africa Renewal> accessed 8 October 2021

[906] Leon Usigbe,Nigeria: COVID-19 Vaccine Rollout Kicks Off in Africa's most Populous Country', Africa Renewal (6 April 2021) <Nigeria: COVID-19 vaccine rollout kicks off in Africa's most populous country | Africa Renewal> accessed 8 October 2021

for the second dose at the appropriate time.[907]The use of this mechanism of pre-registration must be sustained as it will aid in collecting important data that will be most beneficial for future vaccination campaign planning and execution.

As of 1st September 2021, Nigeria had vaccinated only 1.3 percent of its population (fully and partially) while the current vaccination rate elsewhere in the world is 39.5percent (partially and fully vaccinated).[908] This is far from the initial aspiration of the health system to vaccinate 20percent of priority population by end of 2021.

Nigeria and Multilateral Arrangements for Vaccine Access

Notwithstanding the need for Nigeria to develop its vaccine production capacity and reduce overdependence on vaccines from the west, the point must be made that the key to Vaccine Access for countries with weak vaccine production capacity is a robust multilateral arrangement system that will prioritise safety of all humans. The multilateral arrangement system is also crucial to ending Vaccine inequity across regions.

International Vaccine Arrangements

Nigeria is a beneficiary of the COVAX Facility. The COVAX vaccine-sharing scheme is a global collective led by a coalition of

[907]Leon Usigbe,Nigeria: COVID-19 Vaccine Rollout Kicks Off in Africa's most Populous Country', Africa Renewal (6 April 2021) <Nigeria: COVID-19 vaccine rollout kicks off in Africa's most populous country | Africa Renewal> accessed 8 October 2021

[908] Leon Usigbe,Nigeria: COVID-19 Vaccine Rollout Kicks Off in Africa's most Populous Country', Africa Renewal (6 April 2021) <Nigeria: COVID-19 vaccine rollout kicks off in Africa's most populous country | Africa Renewal> accessed 8 October 2021

WHO, GAVI[909], the Vaccine Alliance and the Coalition for Epidemic Preparedness Innovation (CEPI), to assist low-income nations acquire COVID-19 vaccine for their populace.[910] Under the COVAX Facility arrangement, Nigeria has received delivery of the COVID-19 vaccine. On March 2, 2021, the Country received nearly 4 million doses of the AstraZeneca/Oxford vaccine, manufactured by the Serum Institute of India (SII), Mumbai via the COVAX Facility. This was said to be a historical step towards the equitable distribution of COVID-19 vaccines globally.[911]

Regional Vaccine Arrangements

Nigeria as a regional cooperating country in Africa is a member of the African Union (AU). The Union, in an unprecedented move, established a platform for the acquisition of vaccines for its member states. The platform – African Vaccine Acquisition Trust (AVAT) – was setup with ten members drawn from within the Continent to achieve herd immunity for the continent through a pooled fund from within its members and through the Africa Export, Import Bank – Afrexim Bank.[912] AVAT is aimed at

[909] Gavi is co-leading COVAX, the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator. This involves coordinating the COVAX Facility, a global risk-sharing mechanism for pooled procurement and equitable distribution of eventual COVID-19 vaccines <https://www.gavi.org/covid19>accessed 24 July 2021

[910]Akindare Okunola, COVID-19 vaccine nationalism Puts World on Brink of 'Catastrophic Moral failure': WHO Chief' Global Citizen January 18 2021<COVID-19 Vaccine Nationalism Puts World on Brink of 'Catastrophic Moral Failure': WHO Chief (globalcitizen.org)> accessed 8 October 2021

[911]UNICEF, COVID-19 Vaccines shipped by COVAX arrived Nigeria (02 March, 2021)<https://www.unicef.org/nigeria/press-releases/covid-19-vaccines-shipped-covax-arrive-nigeria> accessed 19 November 2021

[912] UNECA, Africa Announces the rollout of 400million vaccine doses to the African union Member States and the Carribean' <Africa announces the rollout of 400m

supplementing efforts under COVAX to attain a 60 percent vaccination level for Africa as advised by Africa CDC.[913]

The Trust signed an agreement with the giant vaccine manufacturer Johnson and Johnson to acquire 220 million doses of the Johnson and Johnson single dose vaccine. Several reasons were adduced by the Trust for the choice of this vaccine under the pooled fund arrangement. These range from temperature requirements, cost of administration, being a single dose vaccine and most importantly, it is partly produced in Africa at the Aspen Pharmacare facility in Gqeberha, South Africa. In addition, the vaccine has a comparably long shelf life.[914] This is an important benchmark as this will be the first time the Union is galvanising efforts to acquire vaccines to protect AU citizens.[915] The pooled fund acquisition efforts are supported by a tripartite partnership between the World Bank, the AU and the AVAT Task Team. Also, UNICEF, under the initiative will assist in procurement and

vaccine doses to the African Union Member States and the Caribbean | United Nations Economic Commission for Africa (uneca.org)> accessed 15 October 2021

[913]Unicef, The Africa union's African vaccine acquisition Trust AVAT initiative' <The African Union's African Vaccine Acquisition Trust (AVAT) initiative | UNICEF Supply Division> accessed 15 October 2021

[914] UNECA, Africa Announces the rollout of 400million vaccine doses to the African union Member States and the Caribbean' <Africa announces the rollout of 400m vaccine doses to the African Union Member States and the Caribbean | United Nations Economic Commission for Africa (uneca.org)> accessed 15 October 2021

[915] UNECA, Africa Announces the rollout of 400million vaccine doses to the African union Member States and the Caribbean' <Africa announces the rollout of 400m vaccine doses to the African Union Member States and the Caribbean | United Nations Economic Commission for Africa (uneca.org)> accessed 15 October 2021

delivery of vaccines to AU member states and will provide additional logistic support to countries that may need them.[916]

Since inception, the Trust has procured in concert with its partners, 12,000 doses of the J and J vaccine to AUC and embassy staff in association with the government of Ethiopia,[917]108,000 doses to Botswana[918] and Ethiopia,[919]52, 800 doses to Sierra Leone,[920]Ghana[921] and Nigeria[922] received 177,600.

As of September 23, 2021, the AU through its AVAT Initiative in association with its partners and UNICEF had delivered 4.4 million doses out of the planned 400 million Johnson and

[916]Unicef, The Africa union's African vaccine acquisition Trust (AVAT) initiative'<The African Union's African Vaccine Acquisition Trust (AVAT) initiative | UNICEF Supply Division> accessed 15 October 2021
[917] African Unionj, African vaccine acquisition Trust delivers 12,000 doses of COVID-19 vaccine to the African union' <African Vaccine Acquisition Trust delivers 12 000 doses of COVID-19 vaccine to the African Union | African Union (au.int)> accessed October 15 2021
[918]Unicef, African vaccine Acquisition Trust Delivers 108,000 doses of COVID-19 vaccine to Botswana'<African Vaccine Acquisition Trust delivers 108,000 doses of COVID-19 vaccine to Botswana | United Nations Economic Commission for Africa (uneca.org)> accessed 15 October 2021
[919]UNECA, 108,000 doses of covid-19 vaccine delivered to Ethiopia'<108,000 doses of COVID-19 vaccine delivered to Ethiopia | United Nations Economic Commission for Africa (uneca.org)> accessed 15 October 2021
[920] AVAT, African Vaccine acquisition Trust Delivers 52,800 doses of COVID-19 vaccine to the Republic of Sierra Leone' <Sierra-Leone-Press-Release-Draft-edited_02082021.pdf (dhse.gov.sl)> accessed 15 October 2021
[921] Jonas Nyabor, Ghana Takes Deliveryof 177,600 doses of Johnson and Johnson Vaccine'<Ghana takes delivery of 177,000 doses of Johnson & Johnson vaccine (citinewsroom.com)> accessed 15 October 2021
[922] The Borgen Project, the US and COVID-19 Programs in Nigeria'<African Vaccine Acquisition Trust (AVAT) - The Borgen Project> accessed 15 October 2021

Johnson COVID-19 vaccines to 26 member countries according to Dr. Nkengasong, the African CDC Director.[923]

Interestingly, the choice of Johnson and Johnson by AVAT was predicated on several issues including the fact that the vaccine will not require very cold temperatures for storage. Many Countries under the AU, such as Nigeria still grapple with power generation issues and cold chain equipment shortage. As the continent stirs itself towards vaccine security for its members, these issues must be addressed in a sustainable manner to ensure that progress made in the way of manufacturing capacity is not further hampered by lack of storage and transportation capacities.

Recommendations

An issue as important as rolling back the impacts of the Covid-19 pandemic on global and national economies has undoubtedly attracted suggestions as to its remedy. Recommendations as to the way forward to ameliorate the impacts of vaccine nationalism on the effort to overcome the pandemic will review these suggestions and identify which the authors believe will deliver a holistic and faster relief to the international community and national economies.

The Director General of the World Trade Organisation, Dr Ngozi Okonjo-Iweala, a Nigerian, posited in June 2021, that 'it is now clear that over-centralisation of vaccine manufacture capacity is

[923] African Union, Africa CDC has now Distributed 4.4million J&J vaccines to AU Member States a Total of 400million to be Distributed'<Africa CDC has now distributed 4.4 million J&J vaccines to AU member states A total of 400 million to be distributed | African Union> accessed 15 October 2021

incompatible with equitable access in a crisis'.[924] She went on to add that 'regional production hubs, combined with open supply chains will benefit public health preparedness'. The DG of WTO couldn't be more correct. In the face of vaccine nationalism, waiting on the West has been the undoing of the return to normalcy or the opening of African economies including Nigeria. More importantly, the authors want to humbly extend her position which is clearly predicated on the unfortunate financial situation of African countries. Better still, African countries should aspire like India and China to break free from waiting on the West for crisis management in public health care emergency situations. A long-term plan and investment well executed – an attribute which is sorely lacking in the running of most low-income countries – will lead the countries out of leaving the wellbeing of their populace in the hands of wealthy countries who time without number have differed to the need of their citizens for good reasons.

Government agencies and the federal government as an entity must commit to consistency in its policy formation and implementation. More importantly, a change of administration must not result in a complete and total change of policy and institutional framework for long-term arrangements such as vaccine production and security.

Nigeria has been noted as a nation that finds it difficult to maintain service and replace dilapidated public infrastructure.

[924] Abiola Olasupo, Nigeria, South Africa, Others considered as vaccine production hubs-WTO' The Guardian(21 June 2021)<Nigeria, South Africa, others considered as vaccine production hubs - WTO — Nigeria — The Guardian Nigeria News – Nigeria and World News> accessed 11 October 2021

This is also evident in the vaccine value chain as important equipment that make up the chain is left to waste away, not maintained when it breaks down and not installed altogether after it is received as donation. Governmental agencies must work to remove all impeding factors to its responsibility to service, replace unserviceable equipment or install donated equipment in order to improve public health emergency capacity of the national health system.

The importance of data cannot be overemphasised in an economy as robust as Nigeria with an asset many nations only aspire for through large immigrant population. The current use of online platforms must not be relegated to COVID-19 vaccine roll-out alone. This must continue to be deployed substantially across the world and indeed Nigeria when such situations arise, as data generated will be used to improve on planning and future vaccine roll outs.

The importance of infrastructural development and systemic upgrades particularly regarding power generation cannot be overemphasised. A country with a pedigree like Nigeria's must do whatever it takes to rid itself of power outages no matter how short. A country with a teeming youthful population the size of several economies continues to waste its potential from its lack of direction in leading its people out of power problems. Even when vaccine manufacture arrangements can function properly, vaccines need to be stored in some form of cold chain no matter how rudimentary. This will require a stable national power grid, functional even in the remotest parts of her borders. Several policies and reforms are being made in Nigeria's power sector, but more efforts need to be made to overcome power outages and

national grid collapses. Privatisation of the government owned National Electric Power Authority (NEPA) now Power Holding Company of Nigeria (PHCN) into regional privately owned distribution companies was pursued in the sector and there was much hope when this was done. However, the initiatives in the power sector are yet to yield sustainable results. .

There is also need for private sector engagement to address cold chain deficits experienced at different points in the vaccination value chain.

Conclusion

The need for vaccine security and reliable access to pharmaceutical and non-pharmaceutical protocols for the protection of the health and safety of citizens in health crisis remains an important goal. Countries must rise to this challenge by making long-term investments in the health sector to ensure readiness with infrastructure, supply chain and human capital development. As the battle against COVID-19 evolves across the globe, especially in Europe, Nigeria must not rest on her oars but brace up for eventualities. The low susceptibility of the Nigerian population to the virus and the low rate of infection compared to the West should not make the country complacent especially bearing in mind the mutating potential of the virus. Nigeria should use its low infection window as a leverage to enhance its Vaccine production capacity and deliberately review its policies in this regard. More importantly, Nigeria must find avenues to ensure that policies are consistent for the long-term in a particular direction to ensure that meagre resources are not wasted on reinventing the wheel often to no end.