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# LESSONS LEARNED FROM COVID-19 FOR AFRICA

REIMAGINING A STRONGER HEALTH SECTOR

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## Lessons Learned From COVID-19 in Africa: Re-imagining a Stronger Health Sector

### **Executive Summary**

At the end of 2021, the world has made significant progress in combatting the COVID-19 pandemic. Companies have not only developed some of the most effective vaccines against any disease, but have done so in record time, and the world is closing in on having administered 9 billion doses of a dozen different vaccines. That remarkable progress is counter-balanced by more than five million deaths from the disease around the world, with significant risk of new variants emerging from unvaccinated populations. The world will continue to grapple with COVID-19 until all regions have reached much higher vaccination rates, which will require much greater focus on increasing access to vaccines in Africa, where vaccination rates lag far behind the rest of the world.

This paper focuses on lessons learned for Africa. It is the continent with greatest need for more vaccines and for improved capacity in local health systems. Despite deficiencies in staffing and the availability of vaccines and related equipment, Africa has produced some uniquely successful health governance solutions that have important lessons for other regions. African governments are looking to build on successful innovations from this pandemic, including better use of digital facilities to reach isolated populations, as they continue to fight the current COVID-19 pandemic and increase their capacity to manufacture the vaccines and equipment they consume.

This is an opportunity to re-imagine Africa's health structure in ways that put communities first, break through disease stovepipes to use resources more efficiently, and truly incorporate the private sector as a partner with the public sector to produce better health outcomes. It is also an opportunity to include the economic impact of disease management measures on populations, particularly in Africa, as an important part of health policy planning. African countries will have an opportunity to apply as many lessons as possible from the first two years of the COVID-19 pandemic as the supply of vaccines to Africa significantly ramps up in 2022.

This white paper draws from government reports, an extensive technical literature that is beginning to appear, together with expert insights from a range of symposia and conferences sponsored by CCA and other organizations. From this eclectic set of sources, we draw lessons from the campaign against COVID-19 and highlight the most relevant points for fostering greater private sector collaboration with public health authorities to produce better health outcomes in Africa.

### **Africa got a number of things right in addressing the pandemic....**

A number of experts predicted that Africa would quickly become the epicenter of COVID-19 because of dense informal settlements in cities, the lowest number of health workers per capita of any continent, lack of equipment, vaccines and finances and challenges involved in managing often porous borders in rural areas.<sup>1</sup> While these challenges are very real, sometimes lost in the discussion is just how much Africa got right. African leaders in general took the threat of COVID-19 very seriously, treating it as “a national crisis,<sup>2</sup>” kept it above domestic politics, and employed a regional approach. Only 22 days after the World Health Organization (WHO) declared the outbreak a public health emergency of international concern, the African Union (through the African CDC) convened an emergency meeting of all health ministers that endorsed a Joint Continental Strategy for COVID-19.<sup>3</sup> Almost all AU Member States

implemented the initial control measures, including in economic lockdowns, in most cases weeks before even reporting their first COVID-19 cases. Nearly three-fourths (72%) of countries still had these measures in place at the end of December 2020, and roughly half in June 2021, despite the “invasive” nature of the health and economic measures.<sup>4</sup>

When COVID-19 first started spreading in February and March 2020, African governments, like their counterparts around the world, scrambled to sign contracts for personal protective equipment (PPE) and many basic medical supplies. To their consternation, they often found that they were at ‘the back of the line’ in talking to vendors because they lacked the long-standing relationships with companies, companies lacked distribution networks that could execute orders, and/or because many African countries were not ordering at scale, and it took companies as much effort to process a big order as a small one, stressing prioritization of large volume contracts first. The net result was growing frustration that led African government leaders to work with the African Union and private sector representatives to produce a unique, commercially based solution, the African Medical Supplies Platform (AMSP).<sup>5</sup> This platform combined individual AU Member State orders for goods that leverage the full scale of the 1.3 billion Africans, obtaining better prices from vendors, while also taking care of foreign exchange and logistics issues up front. The AU has also used this site to raise the profile of African-made alternatives, which filled critical gaps in international supply chains for PPE items like masks and gowns. The AU built on this success for the African Vaccine Acquisition Task Team (AVATT), which has likewise helped countries obtain commercial supplies from vaccine manufacturers. Dr. John Nkengasong, Director General of the African Centres for Disease Control and Prevention, explained that “in thirty years of working in public health, I have never seen the continent of Africa exercise the kind of leadership it has exercised” in this case, which he characterized as “visionary and practical” because it directly engaged the private sector and rallied countries around a common goal.<sup>6</sup> Greater public sector collaboration with the private sector is emerging as an important lesson from the COVID-19 experience in Africa, and will create significant new opportunities to deliver better health outcomes.

African health officials consult regularly with their regional counterparts and AU officials to coordinate actions and policies, and share the latest data, lessons learned and discuss common challenges. This structure helped African countries adopt regional solutions to augment national efforts to mitigate some structural weaknesses, which proved particularly helpful in tackling the spread of COVID-19 across national borders, notably in rural areas.<sup>7</sup>

### **... and some things could have gone better**

Several African countries have had real difficulties rolling out vaccine campaigns within their own borders. Three months after the first vaccines began arriving in quantity, WHO Africa Regional Office (AFRO WHO) noted that nine countries had used less than one quarter and 15 countries had used less than half of the vaccine doses they had received from COVAX, the vaccines pillar of the Global Access to COVID-19 Tools Accelerator (ACT). COVAX, an initiative of GAVI, the Vaccine Alliance, the Centre for Epidemic Preparedness Innovations (CEPI), and the WHO, with key delivery partner UNICEF, was established to accelerate the development and delivery of COVID-19 vaccines and to ensure fair and equitable access to every country in the world<sup>8</sup>. At the end of November 2021, despite COVAX’s efforts, the situation remains much the same in many of these countries. Sixteen of the 19 countries with vaccination rates lower than Syria (covering 5.2% of its population) are in Africa, and seven African countries have lower vaccination rates than war-torn Yemen (at 1.8% of its population).<sup>9</sup>

There are two interlocking factors in Africa's challenges with vaccinating its population. The first is the lack of vaccine supply from international companies. Early December 2021 figures from the African CDC show that African countries have been able to procure 417 million doses of vaccines to serve Africa's 1.3 billion people, meaning that countries have only been able to secure vaccines to cover an average of 32% of their populations. For the world to attain the needed level of health security, that number needs to be close to tripled. The average, however, masks a very wide range of performance among African countries. Four African countries (the islands of Seychelles, Mauritius, Sao Tome and the Comoros) report obtaining more doses than they need for their population, while Botswana, Morocco, Lesotho and Cabo Verde have obtained sufficient doses to cover more than 80% of their populations. Eight countries have only obtained enough doses to cover 5% or less of their population. Several of the largest countries, including Nigeria, Ethiopia, Sudan and the DRC, have covered less than 10% of their populations.<sup>10</sup>

The second related issue is how successful countries are at administering the vaccines they receive. Several stand out, including Tunisia, Rwanda, Botswana, Seychelles and Mauritius, all of which have administered more than 80% of the doses they received. More than 20 African countries have administered over 50% of the doses they have received. Several factors have played into a country being able to roll out a COVID-19 vaccine campaign successfully, including structural barriers, "apathy" or lack of concern from the population about COVID-19, and vaccine hesitancy.<sup>11</sup>

Examples of structural barriers include a lack of trained staff to administer vaccines and funding for logistics, particularly to reach rural communities. Anecdotes illustrate the difficulties, including lack of cotton swabs, face masks and hand sanitizer, needles and vials<sup>12</sup>, as well as insufficient numbers of trucks to transport vaccines and/or funds to pay drivers and buy fuel.<sup>13</sup> Planning the rollouts was also a factor in shaping outcomes. Some countries also experienced difficulties in tracking and identifying priority groups representing higher risk of infection (e.g., elderly or those with co-morbidities).<sup>14</sup> These challenges have been exacerbated by the specific nature of the COVID-19 vaccines, two of which require ultra-cold facilities to transport and store. Success in rolling out vaccines for other diseases has also not necessarily translated into high distribution rates for COVID-19 doses (COVID-19 compared, e.g., with those countries working with GAVI to vaccinate children for diphtheria-tetanus-pertussis DTP-3),<sup>15</sup> suggesting that countries may not be able to simply replicate strategies used for other diseases.

Persuading people to take the vaccines also emerged as an important issue. In some countries, particularly in rural areas, particularly in the spring and summer of 2021, few people knew someone that had been diagnosed with COVID-19, which made it harder to convince them to get the vaccine – especially if they had to invest significant time and/or money travelling to receive it.<sup>16</sup> Vaccine hesitancy is a related phenomenon, and refers to (often strongly held) opposition to receiving a COVID-19 vaccine, and it seems to have grown in different countries for a variety of reasons. At the outset of the COVID-19 pandemic in 2020, Africans were found to be "generally more likely to take vaccines than others."<sup>17</sup> Unfortunately, concerns regarding the safety and efficacy of COVID-19 vaccines, often raised first in Europe or elsewhere, "as well as myths and misinformation spread fast on social media and contributed to vaccine hesitancy."<sup>18</sup> The safety concerns about specific vaccines prompted several governments to pause or stop their vaccine rollouts.<sup>19</sup> African governments also faced unexpected interruptions in vaccine supply when India unexpectedly shut down all vaccine exports to combat a dramatic surge in domestic COVID-19 infections in the spring of 2021. Taken together, the safety review and Indian supply interruptions undercut broader public trust and started generating hesitancy.<sup>20</sup> The

African CDC found that the combination of factors led to a sharp rise in vaccine hesitancy in Africa, driven by a combination of distrust and misinformation about the vaccines, lack of awareness of those who have been infected, and lack of trust (either in governments or companies, varying locally).<sup>21</sup>

One of the factors also affecting management of outbreaks in various countries was the economic impact of announced public health measures. The sheer speed with which COVID-19 spread across the entire globe made it more challenging than previous diseases that led governments to impose lockdowns (such as Ebola, SARS and MERS). The emergence of variants and new waves of COVID infections has also proven difficult as countries wrestle with when to open up, and when to re-impose restrictions. While Africa's relatively young population proved initially less susceptible to COVID-19 than other continents with older populations, these challenges were exacerbated in Africa because so many people in many countries work in the informal economy with much more limited access to any social safety nets or government programs. More complete lockdowns imposed significant hardships in many African nations, which in turn eroded compliance with health measures as time went on. Africa's greater reliance on international trade also left countries and companies more vulnerable to international supply chain disruptions. Some African governments have managed better than others, although there would seem to be room for improvement in incorporating economic impacts of public health measures.

#### **Africa has already determined it will rely more on its own resources for its future health security**

Dr. Nkengasong noted that "you cannot fix a health system when you need it – you must fix it before you need it." He said Africa "has to step back and look at the whole health security architecture ... so that collectively we produce a very strong health security architecture that enables us to respond to future pandemics."<sup>22</sup> In looking at how to fix Africa's health systems, he said it is time to look at the global health architecture, much of which was built after WWII, when Africa only had 300 million people. It now has 1.3 billion, and is on its way to doubling in the next 20 years. He argued that we need to reshape that architecture, including setting up funding that will strengthen local health systems, develop human capital, create partnerships with the private sector and other parts of the world, and expand Africa's research and development capabilities.<sup>23</sup> He also noted that "as a continent, we learned that we cannot guarantee the health security of the people by relying on others to determine and shape [our] fate."<sup>24</sup>

Where Africa might have previously relied more heavily on international assistance and charity as key planks in government response plans (as in previous disease outbreaks), the experience with COVID-19 has accelerated an explicit shift to greater self-reliance. In April 2020, African officials actively participated in the launch of the COVID-19 Vaccines Global Access (COVAX) initiative, directed by the Global Access to Vaccines Initiative (GAVI), the Coalition for Epidemic Preparedness Innovations (CEPI) and the WHO, and supported by the European Commission and France. COVAX was set up expressly to coordinate delivery of COVID-19 tests, therapies and vaccines, leveraging UNICEF's experience as the world's largest vaccine buyer and its extensive logistics network.<sup>25</sup> A mixture of reasons, including 'vaccine nationalism,' supply chain issues with various vaccine manufacturers, and internal funding and governance issues conspired to result in COVAX delivering fewer vaccines later than expected, particularly to Africa.<sup>26</sup>

This experience, among other things, led to African Union Member States endorsing several measures to enable them to exert more control of their future. Most notable is the AU's goal of manufacturing 60%

of the vaccines the continent consumes by 2040. African countries have also dramatically stepped up their coordination on supporting manufacturing of related medical equipment and vaccine inputs. In November, the African Union also announced that the 15<sup>th</sup> country had deposited its instrument of accession, bringing into force the African Medicines Agency (AMA). When fully functional, this body will harmonize standards and procedures among national health regulators. AMA offers the prospect of a much more coordinated, ideally accelerated review process for medicines, vaccines and equipment that should expedite and harmonize access for African patients to all the world has to offer, while also offering a stronger platform from which to address health and safety issues. The African Union is already working with international partners, including in the private sector, to establish vaccine manufacturing efforts in several countries in Africa, first for humans, but ultimately, also for agriculture. The combined impact of these efforts will dramatically increase the private sector role in providing critical health care inputs in Africa.

### **Lessons learned so far**

At the end of 2021, African governments still face significant challenges in ending the COVID-19 pandemic. The significant increase in global vaccine production suggests that the challenges in 2022 will focus more on distributing incoming vaccines than on securing access to vaccine supply. Africa and its international partners have the opportunity to apply lessons learned from the first two years of the COVID-19 pandemic in preparing for that next stage. A number of the steps suggested for that stage would also strengthen the capacity of Africa's broader health care system. As it looks to prepare for 2022, Africa has the opportunity to re-imagine what a new, stronger health care sector would look like, one that would put it on the road to achieve AU goals.

#### **1. Keep what works and harvest lessons from previous challenges to strengthen health systems**

Pre-COVID-19, Africa already had one of the lowest densities of skilled health professionals in the world, with roughly one quarter of the global average (at less than five per 1000 versus the global average of 23).<sup>27</sup> Sub-Saharan Africa supports 24% of the world's disease burden, but only maintains 3% of the global health work force, and suffered a shortfall in 2016 of an estimated 4.2 million workers that was forecast pre-COVID-19 to grow to 6.3 million by 2030.<sup>28</sup> There is also an 'urban bias' in location of physicians, with health worker shortages more than twice as high in rural areas. Expert evaluations of Ebola and other outbreaks identified many of the same challenges affecting COVID-19, including the need for more doctors, clinicians and nurses.<sup>29</sup> Recognizing that countries are strapped for resources as well as staff, the Africa Regional Office of the World Health Organization maintains active diagnostic tools to help countries identify areas that need improvement, and has developed a series of specific tools to focus in on key areas.<sup>30</sup> COVID-19 has highlighted the importance of following through on those lessons learned and applying them to make best use of the resources and staffing that exists.

Political will is also important, including avoiding complacency, given how rapidly new variants can emerge and new waves of infections can break out.<sup>31</sup> It is instructive that African health ministers had the opportunity to observe India's sudden increase in cases in April 2021, and resolved to take a number of immediate actions, such as introducing rapid testing and stockpiling provisions that could be deployed quickly to emerging COVID-19 hotspots in Africa. Unfortunately, despite taking all the right resolutions, African governments implemented few of these measures on the ground before the fourth wave of the Delta variant brought a surge of infections to Africa.<sup>32</sup>

One of the most important steps governments can take to reduce complacency and improve public policy response is to improve surveillance and diagnostics. In May 2021, the UN Economic Commission for Africa (UNECA) presciently forecast that the emergence of new COVID-19 variants will be one of the most important risk factors, which in turn makes it critical for countries to be able to accurately track disease outbreaks in as close to real time as possible.<sup>33</sup> The Global Health Security Index (a comprehensive assessment done by Johns Hopkins and the Nuclear Threat Initiative of all 195 countries that are parties to the International Health Regulations) cites the importance of being able to measure the number of COVID-19 cases and deaths as one of the five most important lessons of the pandemic.<sup>34</sup> This was also one of the most important lessons from Ebola, and led to significant improvements in Africa's ability to track and trace outbreaks of that disease. Unfortunately, the WHO estimated that "six of every seven COVID-19 infections in Africa go undetected due to limited testing capacity,"<sup>35</sup> which in turn also limits the capability to sequence samples and communicate those results to national, regional and global authorities to flag the spread of current or development of new variants. More than half of African governments lack the capacity to sequence samples.

## **2. Leverage technology as a force multiplier**

Given existing shortages, Africa needs to use every resource it can to extend the reach of what it has, and technology offers opportunities in several areas. African countries have a good base on which to build significant innovations developed during the pandemic to develop local solutions in the absence of critical supplies. African governments' use of technology to address critical gaps, and expand the reach of health services generally fell into three categories: disease prevention and communication; disease surveillance; and clinical supplies and management.<sup>36</sup> The private sector layered additional improvements on top of this, including in sharpening supply chain management, expanding across a broad range of services, and new ways of training. Examples of technological applications included a variety of automated warnings and communications, platforms for receiving emergency calls and/or mapping the spread of infections, public opinion monitoring, 3D printing for PPE and ventilators, online training and triaging, and greater use of cashless and electronic payments systems for medical services.<sup>37</sup>

Several governments made good use of technology to upgrade and digitize the capacity of health centers to collect the results of COVID-19 tests, track patients' movements and trace new infections.<sup>38</sup> Some adapted existing systems to track HIV patients, which enabled them to set up mapping systems to track the spread of COVID-19 within their countries, and to use that data to direct the distribution of critically short supplies and medicines.<sup>39</sup> Others found that digital tools enabled them to improve their supply chain management significantly, allowing for more active and faster distribution of resources to where they were needed, rather than distributing supplies in equal increments to a range of health facilities. Greater use of these technologies and data management applications has also pointed up important areas where health systems can streamline supply chains, including rationalizing the number of products and technologies they stock, and better ensuring that supplies are ordered in advance based on forecasts of where outbreaks may emerge in 6-12 months based on modelling data.<sup>40</sup>

Electronic or digital vaccine registries are a particularly promising tool, including paving the way to a registry for all non-COVID-19 vaccination programs, and providing the backbone for the digitization of health care delivery from diagnosis to treatment to more efficient referrals.<sup>41</sup> Greater use of this potential to plan expanded vaccination campaigns will be particularly important in 2022 as larger

quantities of vaccines arrive. African governments also have a significant opportunity to make better use of the data they already collect, much of which is not digitized, and little of which is collected or collated into a usable network. One estimate is that Africa only makes efficient use of 5% of the data it currently collects.<sup>42</sup> Africa may lose as much as \$300 billion a year because health authorities cannot share needed information.<sup>43</sup> Realizing that potential, however, will require governments to address a number of issues, beginning with bringing down the high cost of data by expanding and upgrading existing ICT infrastructure and equipment, expanding support for digital literacy, and improving the broader policy environment, including sorting out provisions for tax and requirements for e-commerce.<sup>44</sup> A related issue is the effort by some countries to impose limits on cross-border information flows that would impede the development of tele-health and remote diagnostics.

In applying technological and/or digital solutions for government services, the experience of COVID-19 in Africa shows that solutions need to be designed for a specific context and community if they are to be effective. Solutions developed elsewhere often assume access to a steady supply of electricity or affordable internet which may not be available, particularly in rural areas. Applications designed elsewhere can ask for either too much or inappropriate information. There is also a critical question of how the output is used, in that even the best management application is of little use if it has not been designed to operate with or plug into a national health system's information system.<sup>45</sup> This lesson resonates beyond Africa, with examples from the United States flagging the importance of reducing the amount of unnecessary documentation required to diagnose and/or treat patients.<sup>46</sup>

### **3. Manage the links among health measures, communities, and economic impact better**

The Global Health Security Index stresses that “the success of disease-mitigation efforts is contingent upon public trust in government, healthcare institutions, and public health professionals. In the absence of trust, public cooperation and compliance with recommendations – including physical distancing, mask mandates and shutdowns – are likely to fail and be more vulnerable to corrosive misinformation.”<sup>47</sup>

While true the world over, the importance of treating the whole community is even more important in Africa as a way to fill in gaps in health and governance structures. A critical lesson from COVID-19 in Africa is the importance of thinking smarter about communities, better understanding the key role they play in combatting the spread of disease, as well as the ultimate importance of health in protecting livelihoods. Achieving that requires a delicate mix of adroit communications that reach communities, and actions that maintain public trust, including demonstrated competence in managing a disease. Better disease management, in turn, can also be facilitated with better communication and greater community trust.

Trust has several components, including the ability to manage a disease outbreak, effective communication about the preventative measures and available treatments, and managing the economic impact of health measures. Africa has had significant success in rolling out vaccines in a number of countries for a number of different diseases. The U.S. CDC cited the example of Burkina Faso's ‘aggressive and successful’ meningitis vaccination campaign as one example.<sup>48</sup> In designing a successful vaccine campaign, “communities need to understand why the vaccine is important for them, that it is safe, and what the strategy for distribution is – and that their social and cultural norms will be respected throughout the process.”<sup>49</sup> It is also critical that health authorities understand there is no ‘one size fits all’ approach, and that outreach to affected communities will need to be proactive, involve community leaders (ideally in their local language), and contextualized (the more local the better).<sup>50</sup>

A number of African governments did a good job communicating clear messages to key stakeholders early in the outbreak of the pandemic, helping communities reduce the spread of the disease.<sup>51</sup> AFRO WHO credits Ghana with doing a good job generating demand for vaccines “with clear audiences, messages and well-planned work with radio, TV, social media and through trained spokespeople, influencers, partner organizations and among communities.”<sup>52</sup> It also credits Angola, Ghana, Mauritius and Rwanda with creating multi-sectoral partnerships at various levels throughout their countries with delivering clear messages that helped build enthusiasm to receive the vaccines.

Effective communications require partnerships beyond just governments. Companies need to provide consistently clear messaging about adverse events involving their products, and any steps they are taking to mitigate concerns. It is also critical that regulators around the world collaborate better in terms of communicating with their colleagues. Getting more timely information from companies about adverse events is critical to allow regulators to understand the implications of ongoing public health impacts, and to put news items into better context.<sup>53</sup>

Another important part of the campaign against COVID-19 is a robust surveillance capacity. Getting reliable feedback and information from communities is critical, particularly at the start of an outbreak of a new disease or variant, to understand the spread of a disease and the patterns of illness. WHO AFRO noted that health experts have “learned that it is important not only to tell people things, but to also listen to them and to incorporate that information into our strategies ... and we have learned from the Ebola experience to reach out; not just to send radio messages, but to talk to people and hear them.”<sup>54</sup>

Unfortunately, community surveillance in most cases has been disease-specific, rather than collecting broader information about overall health and conditions affecting multiple diseases (communicable or not). A number of observers have stressed the importance of breaking through the disease ‘stovepipes’ that exist more in Africa than in other regions, under which coalitions of entities (including donors and local health officials) have systems in place to treat and test specific diseases, such as HIV, malaria or TB.<sup>55</sup> Before the pandemic, few of these systems shared data or used the same systems, despite the fact that a single patient might interact with multiple health providers separately while suffering from multiple diseases (e.g., hepatitis and HIV). COVID-19 has underscored the importance of health systems gathering one set of unified data wherever possible. To provide one example, surveying door-to-door on COVID-19 affords immediate access to a number of important co-morbidities, like obesity, which would provide important data to design treatment for NCDs, among other things.<sup>56</sup> Beyond just using the data to improve planning and disease response, this is an opportunity to expand treatment and prevention access. COVID-19 has induced a number of governments to update their community-based surveillance approaches in their Integrated Disease Surveillance Response (IDSR), a program that WHO AFRO instituted in 1998 after several significant disease outbreaks, is designed to help integrate multiple categorical surveillance and response systems and link surveillance, laboratory and other data with public health action.<sup>57</sup>

An important part of retaining community collaboration and support is better appreciation of the socioeconomic impacts of health measures. Particularly early in the pandemic, several African countries imposed restrictions that closed places where people congregated, including public transportation, schools, churches and a range of businesses, including in some cases public markets. African governments proved generally very capable of imposing these restrictions, which a number put in place largely for want of other measures they could employ (such as vaccinations). These measures quickly

imposed costs, most notably on poorer communities in informal urban settlements. Countries found themselves having to balance the expected benefit from reduced spread of infection from the certain economic harm imposed. In many cases, governments grew more sensitive to these costs, and became better able to target the location and duration of lockdowns. A number of studies have also highlighted the importance of treating patients' families and communities, and not just patients<sup>58</sup>, echoing an important lesson also learned in the Ebola and HIV campaigns<sup>59</sup>.

#### **4. Improve partnerships with the private sector**

A number of observers have noted that the pandemic has revealed the need for greater coordination across public and private groups by bringing industry and others to the table, particularly referencing the challenges of getting shots in arms in low-income countries and fragile contexts.<sup>60</sup> Companies have already offered timely help in managing logistical challenges, including from airlifting vaccines from international manufacturing sites to destinations across Africa, helping manage restocking or developing new suppliers, and assisting health authorities with in-country distribution and storage arrangements for equipment and vaccines.

The potential for partnership with the private sector to deliver better health results in Africa is not new. Even before the pandemic, the private sector provided a significant share of health services across the continent and has helped a number of countries identify efficiencies and savings. As countries plan for universal health coverage, there is increasing awareness that health systems are national assets that work best when not limited to government action, but rather conceived as involving coordinated efforts of all public and private actors who have skills and resources to contribute to improved health for all. Unfortunately, as UNECA notes, "African governments have tended to view the private sector as a vendor, rather than a partner," which tends to generate distrust and debates about the effectiveness of private sector endeavors in the health sector.<sup>61</sup>

Particularly as international vaccine supply ramps up and it looks like Africa will receive significantly more doses in 2022, there is an opportunity for governments to take a different tack and avoid the tendency to 'go it alone.' Private sector companies can offer significant skills and resources in helping plan and execute vaccine and related equipment distribution, as well as contribute to training, planning for boosters, supply chain management, etc. There is also significant opportunity for governments to partner with companies to scale up successful technology and information systems pilots. Governments have the opportunity to get systems that truly meet their needs and will build longer term capacity, while companies have the opportunity to get the support they need to reach commercially viable scale, ideally using standards or information platforms that are also inter-operable across national borders. For the longer term, there is also opportunity for governments to form stronger partnerships with the private sector to address more systemic needs in strengthening health systems. WHO AFRO has produced guides for countries to assess their preparedness for COVID-19, as well as extensive evaluations for important topics like strengthening Universal Health Coverage. These resources can help governments identify areas where the private sector can help, including capacity building and training, as well as on planning and logistics.

International companies and partners are likely to be much more cognizant of the impact national-level decisions can have on international supply chains that affect Africa, in particular. While the long-term solution will ultimately come from increasing the volume of equipment, medicine and vaccines produced in Africa, in the meantime, there is scope for better coordination of trade measures that

impact the availability of these critical items to avoid disrupting vaccine campaigns in Africa. There is considerable scope for international companies and partners to collaborate with Africa, and a lesson learned from and in fact prompted by the pandemic is that a range of U.S. and other companies have done just that. The rapid evolution of a critical partnership between JNJ and South Africa's Aspen Pharmaceuticals to move from 'fill and finish' manufacture of JNJ's COVID-19 vaccine in 2020 to an agreement for Aspen to manufacture the entire vaccine from start to finish in 2021 is a great example of just how powerful private sector collaboration can be in improving African capacity. Pfizer's 2021 announcement of manufacturing collaboration with South Africa's Biovac, and Moderna's announcement in 2021 that it intends to open mRNA vaccine manufacturing in Africa within the next year or two are other examples. As companies continue to expand their production networks, and as new vaccines and treatments get approved (including the COVID-19 treatments that Merck & Co., Inc., and Pfizer have already announced will be made available for generic production around the world), the scope and pace of this collaboration will expand significantly. International companies and partners also have an opportunity to identify and address trade barriers that hindered supply chains around the world.

#### **5. Financing health care should be seen as a key element of national security, rather than a bill that can be cut in tough times**

The Global Health Security Index report highlights the importance of countries' investing in pandemic preparedness, not just as a health issue, but also to maintain broader public confidence in all aspects of government, as well as mitigating potentially severe economic impacts.<sup>62</sup> In the first year of the pandemic, "it was remarkable the slow speed at which finance came to countries who needed help to cope with the costs of the pandemic. It is clear that surveillance and preparedness were under-invested, even though the costs are pennies on the dollar compared to the costs of the pandemic."<sup>63</sup>

The G20 Summit in October 2021 endorsed the report of a G20 high-level panel, which had recommended providing \$75 billion over the next five years to bolster current institutions, like the World Health Organization, while also supporting necessary improvements around the world. The G20 high-level panel stressed it is important for countries, both developed and developing, to contribute more to their own defense for future pandemics, recommending that countries contribute one percent of their GDP to these efforts.<sup>64</sup> Several panel participants stressed the importance of changing the frame in which health care costs were considered, noting that "pandemics are economic, national security and political, and they need more than health ministers to get the right kind of response,"<sup>65</sup> specifically encouraging finance and health ministers to meet more regularly to address these needs.

As governments plan their next steps in response to the COVID-19 pandemic and beyond, it would make sense to focus on improvements that can address multiple scenarios, rather than financing improvements disease by disease. It would also make sense to factor in public investments that will ameliorate future economic and social impacts of measures like lockdowns and supply chain interruptions. Finally, as governments consider how they can partner with the private sector to fill some of the health system gaps, it will make sense for them to invest in removing bottlenecks and building the infrastructure that can facilitate stronger health and related sectors (e.g., investing more in digital and broadband capacity). These investments in future pandemic preparedness can also generate significant economic growth and jobs.

#### **Conclusion**

African governments' decision to take more responsibility for providing their own health security is commendable. It brings with it the responsibility, however, to take more proactive steps to address existing challenges. The private sector has a significant opportunity to assist countries reach this goal in a variety of ways, ranging from helping to improve training and capacity development to investing in health and other important ancillary services (including energy telecommunications and infrastructure). Investments in expanding the capacity to manufacture and distribute vaccines, medicines and therapeutics, as well as diagnostic tools and laboratory facilities are also important. Companies can also bring significant expertise and resources to help governments better plan for the future, and to manage supply chains and logistics more efficiently. They can also help countries devise innovative financing mechanisms, including insurance and other important measures. Companies have an important role to play as collaborators in improving population health, not just in pandemic preparedness and response, but beyond current challenges – and governments have an important role in regarding them as essential partners, rather than vendors or competitors in achieving the goal of a more secure African health system. African governments and the African Union have the potential to put in place a truly new model that incorporates the private sector as an essential partner in building much more robust health systems across Africa that both deliver better health outcomes and create significant numbers of new jobs, while improving Africa's overall health security.

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