

The Corona Virus Pandemic: Was Africa Caught Flatfooted?

Mary Mwanzia

KCA University

Edward Owino

KCA University

Caroline Ntara

Monarch University

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ABSTRACT: *Despite an earlier warning about the occurrence of coronavirus in future, the world seems to have been caught by surprise. In particular, Africa did not appear to have the financial readiness to afford vaccines or healthcare for the affected. The World Health Organization (WHO) proclaimed COVID-19 a global health crisis in January 2020. Since its detection in Wuhan, China, the infection moved to Europe, particularly Italy in early March and eventually spread to the rest of the world. However, in Africa, the pandemic could have brought unprecedented damage with ripple effects to economies. From the events following the pandemic, it appeared that Africa was not prepared. This study is structured as a research paper that interrogates the literature and presents the key elements of pandemic preparedness for Africa. The new conceptual model can guide researchers and policymakers in conducting further research for scholarly discourse and practical application.*

KEYWORDS: Covid Pandemic, Corona Virus, Pandemic preparedness, Covid 19

INTRODUCTION

The World Health Organization (WHO) proclaimed COVID-19 a global health crisis in January 2020 (Bwire et al., 2022; Lone & Ahmad, 2020; Tessema et al., 2021). Since its

detection in Wuhan, China, the virus has spread to over 190 nations. The core of the infection moved from China to Europe, particularly Italy in early March. By April, the United States had the highest number of coronavirus infections in the world with over 3.2 million Americans or a third of the population and thousands of fatalities. Around 80 countries sealed their borders to visitors from nations with infections, instructing businesses to close and citizens to self-quarantine, and closing schools to almost 1.5 billion children (Congressional Research Service, 2020). China, Vietnam, and other Asian countries imposed travel restrictions in early 2020 (Chinazzi et al., 2020; Reuters, 2020).

Looking at past research conducted by scientists, it appears that the occurrence of Coronavirus had been predicted. Cheng et.al conducted a study in 2007 and noted that:

“The small reemergence of SARS in late 2003 after the resumption of the wildlife market in southern China and the recent discovery of a very similar virus in horseshoe bats, bat SARS-CoV, suggested that SARS can return if conditions are fit for the introduction, mutation, amplification, and transmission of this dangerous virus (Cheng et al. 2007, p.660).

Cheng et al. (2007) noted that the likelihood of the recurrence of SARS and other new viruses from laboratories and animals was possible and urged governments not to ignore the need for preparedness. They also reported the availability of more than 4,000 online publications on the origin and spread of SARS. However, governments ignored the knowledge and failed to learn from the past. Further research projected enormous consequences of the continued consumption of wild game animals and the presence of wet markets in Wuhan, China. Cheng et al. (2007) wrote, *“The presence of a large reservoir of SARS-CoV-like viruses in horseshoe bats, together with the culture of eating exotic mammals in southern China, is a time bomb”* (p.683). These estimates aligned with the 8,096 reported cases of SARS-CoV and 774 related deaths that took place in not less than 30 countries on five continents.

According to Al-Osail and Al-Wazzah (2017), *“the evolution of this virus demonstrated that coronavirus is not a stable virus and can adapt to become more virulent, even lethal, to humans”* (p.2). These predictions came true when WHO announced COVID-19 in early 2020 (Lone & Ahmad, 2020). A retrospective investigation discovered acute cases

of the infection in five cities within Guangzhou over two months. Municipalities such as Foshan, Heyuan, mainland China, and Hong Kong were infected. A similar pandemic that caused substantial fatalities was the Spanish flu of 1918. Hagemann (2020) approximates that influenza infected about 500 million people worldwide and killed approximately 20 to 50 million victims. The flu was originally unearthed in the U.S., U.K., and some Asian regions before rapidly disseminating around the globe. Scientists had not discovered effective vaccines or remedies to cure the killer flu. Unlike COVID-19 whose origin is known, the specific strain that caused the Spanish flu remains unknown (Agrawal et al., 2021).

The economic and health consequences of past viruses elucidate the importance of findings ways of effectively handling a pandemic situation. The economic impacts of the coronavirus have been felt around the world. For instance, the U.S. grappled with the possibility of a deep economic downturn following increased unemployment insurance claims from over 30 million Americans and the country's GDP dropped by 4.8 percent at a yearly rate. Overseas investors withdrew an estimated \$26 billion from developing Asian economies and over \$16 billion from India, raising concerns about a massive economic depression in Asia (Hutt, 2020). Other appraisals also reveal that 29 million Latin Americans could fall into poverty, overriding many years of reducing the income economy in South America (Hutt, 2020). In Europe, more than 30 million Germans, French, Britons, Spanish and Italians have applied for respective state backing of their wages (Congressional Research Service, 2020). In their report, Congressional Research Service (2020) argue that statistics show a drop in the Eurozone economy by 3.8 percent at an annual rate, the biggest quarterly drop since 1995. Subsequently, the IMF estimated a rise in global borrowing by governments (Congressional Research Service, 2020).

In Africa, Covid 19 presented pessimistic and alarming voices with projections on how the pandemic could affect the continent (Lone & Ahmad, 2020). At the height of the pandemic, Africa seemed to be hoping with bated breath that the virus would not cause alarm (Bwire et al., 2022; Gilbert et al., 2020). The reality on the ground was that there were inadequate resources to cater for a pandemic that required immediate attention. Hospitals and other health facilities could not have been able to handle the situation and this led to many avoidable deaths. Further, the inability to produce its own vaccines caused the continent to depend on donors. To date, most of the continent's population has

not received a single dose of the covid vaccine. There are perceptions on the continent against the vaccine, which has led to a low acceptance rate even when the vaccines have been made available. This situation calls for preparation in case a similar life-threatening pandemic occurs in future. Bwire et al. (2022), Gilbert et al. (2020), Obande et al. (2021) and Tessema et al. (2021) note that there is a need for direction on pandemic preparedness in Africa. Lone and Ahmad (2020) argue that Africa needs a unique response to Covid 19 and other future pandemics. No study looks at the present situation relating to pandemics such as Covid 19 in Africa while providing a model that can guide pandemic preparedness and the present research sought to fill this gap.

Problem statement

Despite having knowledge of similar pandemics on the continent such as Ebola, African economies seem unprepared to fight the pandemic today or in the future (Obande et al., 2021). At its peak globally, the disease affected people's way of life due to forced quarantine and social distancing. Border closures resulted in the breakdown of many businesses internationally. The many deaths caused by coronavirus have caused devastation in many families and societies. Massive employee dismissals have left households and breadwinners depressed and poor. In Africa, these effects are felt more due to high poverty rates and a lack of financial preparedness by governments to handle such a pandemic. Therefore, there is a need to find solutions so that Africa can be better prepared in future. According to the United Nations policy brief dated 20th May 2020;

“While the immediate health impact is still evolving, the indirect consequences beyond health already bring a heavy toll. These include food insecurity, lack of medical supplies, loss of income and livelihood, difficulties in applying sanitary and physical distancing measures, a looming debt crisis, as well as, related political and security risks” (United Nations, 2020, p.2).

With this understanding, it is clear that Africa needs direction on how to handle risky situations that pose a danger to the lives of her people. This study fills this gap by interrogating the literature on how Africa can resolve the challenge posed by the lack of preparedness and over-dependence on other continents.

METHODOLOGY

This paper is structured as a review paper that integrates academic scholarship with quasi-academic literature on pandemics with a particular focus on Covid 19. The literature review approach is supported by scholars such as Cooper and Schindler, 2013 and Nakano and Muniz (2018) who argue that good reviews offer guidance on empirical papers for scholarly discourse and practical application. Hence, this study meets the criterion-related validity. The study uses the literature to highlight solutions that African countries can use in risk preparedness to face pandemics. Further, the research proposes a new conceptual model that integrates the key elements of pandemic preparedness. The elements of preparedness can be used by scholars and policymakers as areas for further research to provide insights and ways of implementation.

LITERATURE REVIEW

Pandemic Preparedness

This section proposes and discusses some of the measures that Africa can adopt to handle pandemics effectively.

Building a Resilient Healthcare Workforce

Africa is lacking in the healthcare workforce with chronic staff shortfalls, burnout and stress. Further, the working conditions of the workforce in many African countries affect their performance (WHO, 2022). One critical course of action is prioritizing healthcare workers because they are at the centre of any robust health system. This measure entails training healthcare workers after recruitment to build their response capacity in the event of a pandemic (United Nations Children's Fund, 2022). For instance, when COVID-19 broke out, healthcare staff needed to be trained in screening the population, contact tracing, operating machinery such as ventilators, and administering vaccines (Organization for Economic Cooperation and Development, 2020). Besides training, it is equally crucial to enable the free movement of clinical professionals within Africa and from outside the continent (OECD, 2020). Doing so counters the risk of inadequate skilled medical personnel, given that pandemics demand the mobilization of unusually huge numbers of human resources. Healthcare workers should also be first in line to receive vaccines to enhance their safety and survival in case they contract an infection (UNICEF, 2022). Moreover, they need to be supported financially through competitive

remuneration to keep them motivated and emotionally through counselling and psychosocial assistance to alleviate the traumatizing ramifications of their caregiving work (UNICEF, 2022).

Boosting Pandemic Surveillance and Response

The African continent is lacking in pandemic surveillance and response (Lone & Ahmad, 2020). According to Bwire et al. (2022), there is missing data on the epidemiology of COVID-19 in Africa. Therefore, establishing efficacious surveillance and response mechanisms is critical for pandemic preparedness in Africa. Effective health emergency information systems are necessary to flag an outbreak or new variant and convey this information to a central health authority (Tessema et al., 2021; UNICEF, 2022). South Africa, for example, has a genomic sequencing network for pathogen surveillance, including monitoring incoming COVID-19 variants (Adepoju, 2022). Formal data collection and timely communication are vital to case finding and reporting because a paucity of case information limits stakeholders' comprehension of the heterogeneity in disease burden and their subsequent response (Boum et al., 2021). Therefore, it is essential to strengthening laboratory and pathology services to facilitate case identification, reporting, and tracing. Monitoring the spread of a pandemic is best done at the community level, hence the need to increasingly involve the local population in disease prevention and surveillance. For instance, in Kibera, Kenya, a community-owned company made hand sanitisers and protective clothing for locals and the proceeds were utilized to foster contract tracing, isolation, and treatment of COVID-19-infected patients (Africa Center for Strategic Studies, 2020). Similarly, industrial workers in Dakar used laser cutters to make approximately 1000 face shields for healthcare workers during the COVID-19 pandemic (Voice of America News, 2020).

Further, organisations can ensure a balanced response across different dimensions. An outbreak of viruses restricts congregation and travel, which may trigger employee needs for daily provision, health care and education (Reeves, Lang, & Carlsson-Szlezak, 2020). Companies can participate and create solutions to these issues and build an information hub for workers to obtain necessary information. They can offer health insurance and financial support to shield their workforce from the impacts of any pandemic. Organizations should also introduce clear travel policies in terms of the places staff can

travel, reasons for the travel, and the necessary authorizations (Reeves et al., 2020). The policies will enable employers and workers to work on agreeable schedules.

Building Public Trust in Healthcare Services

The main impediments to health systems in Africa include a lack of available health services, inadequate equipment and resources, limited capacity and inadequate testing ability to check for various ailments. Further, missing scheduled appointments and the reduced flow of patients resulting from public trust affected healthcare (Tessema et al., 2021). Increasing confidence in healthcare personnel and institutions is crucial to confronting and managing future pandemics and enhancing community health. Intensified public awareness creation is key to debunking vaccination myths, reducing community resistance to immunization, and decreasing the burden of infection (Tessema et al., 2021). Hence, it is important to communicate promptly and continually with the public about the available healthcare services, such as vaccines, and the locations and times of administration (UNICEF, 2022). In South Africa, for example, the “Zwakala” campaign utilized various media, including radio, leaflets, and face-to-face meetings, to increase the uptake of COVID-19 vaccines following an initially slow vaccination rate (UNICEF, 2022). Additionally, a private organization called Praekelt.org created a WhatsApp-based helpline that offered real-time data and automated responses to the public’s questions and concerns about the COVID-19 pandemic (Africa Center for Strategic Studies, 2020). This service helped sensitize and educate the masses while combating misinformation and misconceptions.

Integrating Vaccination in Routine Immunization Packages

Immunization packages in Africa do not integrate vaccination for the entire population in cases related to pandemics. This difficulty in integrating vaccination into immunization packages is also witnessed in the Middle East (Butler & Karam, 2022). Mantel and Cherian (2020) posit that to be successfully implemented, vaccines should be integrated into primary health care to optimise vaccine schedules and reach out to more people. Thus, vaccination efforts during a pandemic need to be integrated with the already established immunization programs. Pandemics tend to disrupt the prevention and treatment of preexisting diseases, such as malaria, tuberculosis, and HIV/AIDS (Boum et al., 2021). Thus, vaccines should be readily available and accessible as part of ongoing vaccination initiatives so that they are offered to the public throughout their lifetime

(UNICEF, 2022). South Africa and Rwanda are examples of African countries that have already declared plans to integrate COVID-19 vaccination into their routine immunization programs (Adepoju, 2022). South Africa has additionally committed to routinizing COVID-19 testing in a similar way to malaria and HIV testing (Adepoju, 2022). Including vaccines in regular vaccination programs also promotes equitable access by the general public, who might otherwise be overlooked due to the high demand for vaccination during a pandemic (Boum et al., 2021). Hence, routine immunization regimens must be expanded by including them in primary healthcare services for adults.

Scaling up Local Production/Manufacturing

African states have neglected their potential in the local production of vaccines suitable for their populations. The Covid pandemic brought out the inadequacies and lack of production capacity across the continent. In 2021 only five countries out of the 54 on the continent could vaccinate at least 40 percent of their population by the end of the year. The rest of the continent was dependent on donors from the developed world who were more concerned about protecting their people. Africa imports about 99 percent of all its vaccines indicating weaknesses in local production (Ekström et al., 2021). Besides vaccine doses that can be imported from outside the African continent, other supplies like protective gear were needed to keep healthcare workers and the public safe (UNICEF, 2022). Rapid diagnostic tests and medical equipment are often inadequate yet urgently required during pandemics. Africa could address such shortages and boost its capacity to tackle pandemics by locally producing medical supplies instead of relying on imports (Karim, 2022). In Senegal, for example, local researchers developed a prototype ventilator during the COVID-19 crisis (VOA News, 2020). Similarly, Institut Pasteur in Dakar partnered with the British biotech firm Mologic to develop a rapid COVID-19 test (VOA News, 2020). In Zimbabwe, university and technical college campuses were transformed into COVID-19 response factories for the production of alcohol-based sanitisers (VOA News, 2020). In Ghana, medical personnel collaborated with the U.S.-based company Zipine to use drone technology to distribute COVID-19 tests and protective gear across the country (VOA News, 2020). Last year, the African Union (AU) worked with Africa's Centers for Disease Control (CDC) to launch the Partnership on Africa Vaccine Manufacturing (Adepoju, 2022). This initiative aims at encouraging African nations to cooperate in identifying capacities and mobilizing resources for accelerated vaccine production in the continent.

Interagency Coordination

Interagency coordination is an institutional response to pandemics. It is particularly seen in the creation of taskforces composed of public health and other sectoral experts who can offer different perspectives and guide the national response to a pandemic, drawing from lessons and experiences of other African countries and the world. An example is the African Taskforce for Coronavirus formed by Africa CDC, AU member states, and the World Health Organization (Loembe et al., 2020). During the onset of the COVID-19 pandemic, Nigeria's task force used insights from the 2014 outbreak of Ebola in West Africa to quickly set up isolation clinics separate from regular health facilities to treat coronavirus patients (Bell et al., 2016). The goal was to avoid inundating the country's health system so that it could continue serving patients with other conditions. Coordination is also instrumental to curbing logistical and supply hurdles posed by pandemics. One such challenge is potentially costly infrastructural investments. To counteract this issue, African countries could partner with foreign governments and the international community to obtain the requisite financial or material support. The Philippines provides a good example as it collaborated with UNICEF and the Japanese government to supply rural communities with solar-powered generators to protect the integrity of COVID-19 vaccine doses in the absence of electricity (UNICEF, 2022). Lastly, technology and science are crucial to humanity's collective response to the coronavirus endemic. Yet policymaking on technological possibilities and scientific evidence is limited across societies and governments. The work presented by scholars should be made available to policymakers.

FINDINGS AND DISCUSSION

In sum, the literature review notes that Africa's success at combating pandemics is contingent upon some actions including a strong healthcare workforce, well-functioning surveillance and response systems, trustworthy healthcare services, routinizing vaccination, enhanced domestic production/manufacturing, and interagency coordination. However, the continent should continue pursuing independent, homegrown measures to avoid relying on help from abroad. This dependence is unsustainable, especially in the event of a global pandemic such as COVID-19. Due to its diversity, Africa cannot rely on a one-size-fits-all approach to tackling pandemics. Responses must be customized to individual countries' realities, strengths, resources, and challenges. Based on the

literature review, African countries can benefit from pandemic preparedness. The findings note that there are six elements of pandemic preparedness. These elements are guidelines on critical areas of focus that need to be implemented for epidemics in future. The model of pandemic preparedness is presented as a path towards dealing with crises of a scale similar to the Covid 19 pandemic.

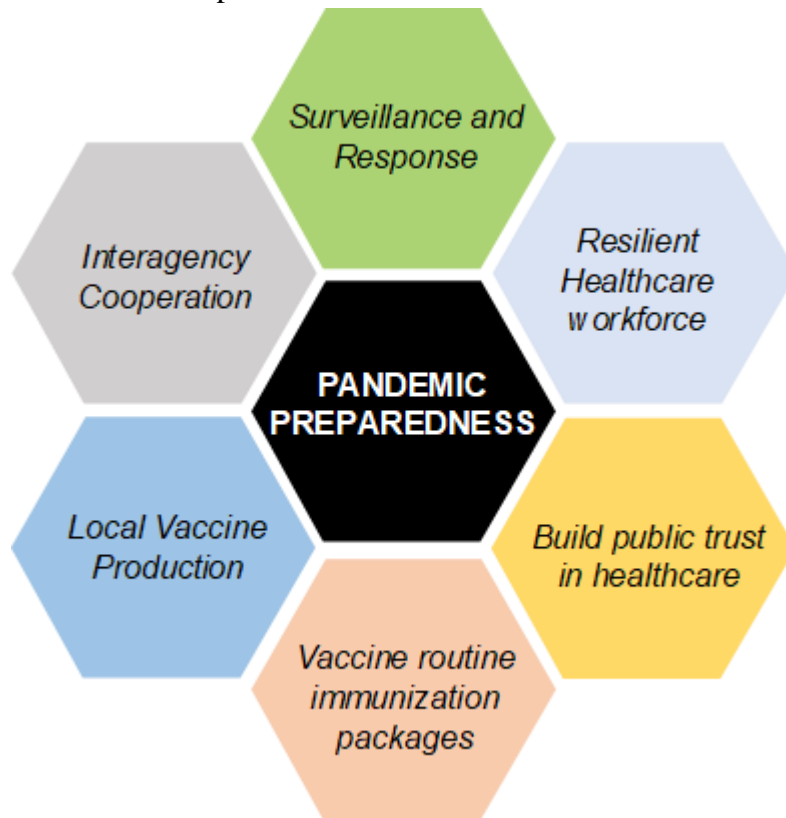


Figure 1: Model of pandemic preparedness.

Figure 1 notes that according to the findings, there are six elements of pandemic preparedness that Africa can employ going forward. These elements include local vaccine production, vaccine routine immunization packages, building public trust in healthcare, a resilient healthcare workforce, interagency cooperation, and surveillance and response. The practical application of these elements can help Africa handle pandemics in the future.

Implications for Policy and Future Research

Africa has faced several pandemics that have led to many avoidable deaths. The Covid 19 pandemic could be a wake-up call to governments, researchers and policymakers across the continent to forge a clear path towards pandemic preparedness. Despite the numerous challenges, Africa remains a resource-rich continent with the potential of solving its problems. While affluent nations had and continue to have enough resources for COVID-19 interventions, the international escalation of the virus revealed major flaws in global health. Africa in particular did not have the financial muscle to handle a pandemic. As researchers continue to examine the virus, the world continues to implement measures to handle such a pandemic. Africa must also learn to protect itself from current and future epidemics. The findings of this research posit that the elements of pandemic preparedness are critical for success.

CONCLUSION AND FUTURE RESEARCH

This paper presents a model of pandemic preparedness that highlights the key element towards Africa's success in handling pandemics. This model can guide future research by scholars who can interrogate the elements and highlight their implementation strategies. The Covid pandemic caught Africa at a place of near helplessness. The outbreak of COVID-19 highlights cracks in global trust, the pitfalls of global interdependency and the challenge for global governance. The reality, however, is generally more disruptive, as national governments and supranational agencies balance health security, economic and social imperatives on the back of imperfect and evolving intelligence. Africa can consider the need for preparedness a governance issue to be taken seriously. Response to pandemics and crises is a governance challenge that may result in long-term consequences for communities and businesses.

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