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AFRICA POLICY RESEARCH INSTITUTE

# PANDEMIC PREPAREDNESS IN AFRICAN COUNTRIES

Status quo and the way forward

Grace Akello | February 2025

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## **Acronyms**

<b>AfDB</b>	African Development Bank
<b>AU</b>	African Union
<b>AfCDC</b>	Africa Centers for Infectious Disease Prevention and Control
<b>CDC</b>	Centers for Disease Control and Prevention
<b>COVID</b>	Coronavirus Disease
<b>DFID</b>	UK Department for International Development
<b>DRC</b>	Democratic Republic of the Congo
<b>EAC</b>	East African Community
<b>IPC</b>	Infection Prevention and Control
<b>MOH</b>	Ministry of Health
<b>NIH</b>	National Institutes of Health
<b>NEOC</b>	National Emergency Operations Centre
<b>NPHI</b>	National Public Health Institutes
<b>POE</b>	Point of Entry
<b>SADC</b>	Southern African Development Community
<b>UN</b>	United Nations
<b>UNICEF</b>	United Nations Children's Fund
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization



## Executive summary

The COVID-19 pandemic highlighted unique challenges and opportunities for pandemic preparedness across the globe. While all continents faced vulnerabilities, the African continent's specific context – including its diverse health systems and social, cultural and political landscapes – requires tailored approaches to pandemic readiness. African nations are proactively preparing to address potential disease threats of global concern, demonstrating a commitment to strengthening their health security. This policy brief aims to build upon ongoing efforts and suggest ways to further enhance pandemic preparedness across the continent.

This study, using a multi-method approach, reveals considerable variation in proneness, containment capacity and preparedness levels for pandemics across African countries. Prior to COVID-19, countries such as Sierra Leone, the Democratic Republic of Congo, Liberia, Uganda and Malawi, had gained significant experience responding to frequent infectious epidemics. This experience fostered a crucial discourse about the need for preparedness for potential future outbreaks of global significance. For instance, following the West African Ebola outbreak, global health and continental stakeholders, including African-led organizations, initiated discussions about regional and domestic preparedness. Many African countries, while benefiting from the World Health Organization's (WHO) standardized epidemic response framework (which typically involves declaring a state of emergency to facilitate coordinated action), have also been

developing and implementing their own context-specific strategies. The standardized response encompasses activities within the pillars of coordination, diagnostics, surveillance, case management and infection prevention and control and African nations are actively working to strengthen these capacities.

Recognizing that a global infectious epidemic requires concerted efforts in preparedness and health financing, many African countries are actively working to strengthen their health systems. While the WHO has provided a valuable blueprint for pandemic preparedness, in-country geopolitical, social and cultural factors play a significant role in shaping how these guidelines are adapted and implemented. For instance, democratic states often prioritize a range of actions, including securitization, strengthening health systems, generating evidence for real-time responses, implementing diagnostics and improving therapeutics.

Furthermore, the study finds that relatively wealthier and democratic African states, such as South Africa, Nigeria, Ghana and Senegal, have integrated certain WHO provisions for pandemic preparedness, including policies aimed at developing robust health systems, while continuously striving to enhance diagnostics and therapeutics. Other nations, including the Democratic Republic of Congo, Liberia, Guinea, Ethiopia, Sierra Leone and others facing significant socio-economic challenges, are focusing on strengthening specific areas of

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pandemic preparedness, such as securitization, while also working to build broader health system capacity within their resource constraints. This highlights the diverse approaches to pandemic preparedness across the continent, reflecting varying priorities and contexts. Although disproportionately susceptible to pandemics, they often lack comprehensive health policies and have primarily adopted the securitization components of pandemic preparedness recommended by the WHO.

Additionally, building comprehensive capacity to manage pandemics in African nations facing significant socio-economic and political challenges presents unique hurdles. While many of these nations have health policies in place, a common initial response to health threats is to declare a state of emergency. This declaration facilitates collaboration with humanitarian organizations, global health actors and the private sector to provide support and expertise. Uganda's decades of experience with such health policy provisions demonstrates a pattern where global health actors, policymakers and clinicians often

apply standardized protocols, assess the impact of infectious diseases, document the number of deaths and develop strategies to address future virulent infectious diseases.

Notably, due to limited domestic resources for health financing, pandemic- and epidemic-prone African states engage in partnerships with global health actors to co-develop health policies and strategic plans. These partnerships offer valuable opportunities for resource mobilization and knowledge exchange, but it is crucial to acknowledge and address potential inequitable power dynamics and resource disparities that have led to differences in priorities, disconnects, contradictions and neglect of critical evidence. Overcoming these challenges requires fostering a relational approach to health policy development for pandemic preparedness. Such an approach emphasizes equitable partnerships, prioritizes health financing, centres decision-making around stakeholders most at risk and adapts standardized pandemic preparedness techniques to local contexts



## Introduction

If health threats<sup>1</sup> of global concern emerge, they can impact the social, economic and political systems of continents and nations. It is therefore important for countries to prepare for pandemics. The COVID-19 pandemic was a significant global shock that led to challenging health outcomes, affecting economic and social gains in various countries. It challenged the ability to respond effectively at local, national, regional and global levels. The impacts of and responses to the pandemic demonstrated that health systems worldwide were tested. According to the WHO<sup>2</sup> (2022), reported COVID-19 deaths exceeded 3.4 million, based on excess mortality estimates produced for 2020. There were considerable differences in the impact and severity of COVID-19 across Africa. For instance, South Africa reported 4,076,463 cases and 102,595 deaths due to COVID-19, while Uganda reported 171,983 cases and 3,632 deaths<sup>3</sup>. Even within countries, disparities existed based on geographical location. In Uganda, for example, a higher proportion of COVID-19 deaths were reported in major cities with higher population density and many patients admitted to under-resourced health centres experience challenges related to underlying conditions and limited access to medical staff, supplies and space (see Nguyen 2014; Akello & Beisel 2019).

Additionally, WHO noted that accurate counts of total deaths directly and indirectly attributed to

COVID-19 are difficult to obtain in many regions, due to varying capacities of civil registration and vital statistics systems capable of providing accurate, complete and timely data on births, deaths and causes of death. While the majority of the excess death estimates, 90% occurred in other countries, while only 10% occurred in Africa. The WHO head recently warned countries to prepare for the next pandemic, as it is expected to be worse than COVID-19. Therefore, there is an urgent need to re-evaluate healthcare systems and the respective policies governing them, with particular attention to the unique contexts and needs of African nations, to minimize the impact of future pandemics. It is also crucial that such evaluations emphasize the importance of social, economic and political differences in the experience of pandemics.

Global health experts use the term pandemic preparedness in the wake of the COVID-19 pandemic to emphasize the need for continents, nations and local communities to 'prepare' for the management of infectious risks and outbreaks (Lakoff 2008, Lakoff 2017). It is argued that pandemic preparedness will involve a complex set of concepts, architectures and practices aimed at fostering a continuous state of alertness and 'anticipatory imagination' amongst policymakers (Lakoff 2017). This preparedness will manifest in frameworks, innovative health information and surveillance

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- 1 Available records suggest a history of infectious disease pandemics dating back to the mid 1300 when the world was afflicted with a plague (Inhorn and Brown 1995). The world was thereafter afflicted with various plagues including influenza. The most recent infectious pandemic experience was in 2019/2020 when Covid-19 affected people worldwide. Influenza pandemic was experienced in the 1800 and the pandemic claimed thousands of lives.
  - 2 WHO (2022) The true deaths toll of Covid-19: estimating global excess mortality. [www.who.int/home/data/datastories/the-true-death-toll-of-covid-19-estimating-global-excess-mortality](http://www.who.int/home/data/datastories/the-true-death-toll-of-covid-19-estimating-global-excess-mortality).
  - 3 See [www.worldmeters.info/com](http://www.worldmeters.info/com)

systems, scenario exercises and emergency response simulations (Ong and Colliers 2004). Although a clear repertoire of preparedness and response measures may not be readily traceable for all past pandemics, it is now understood that effective management of infectious disease threats, along with surveillance and quarantine of affected communities, can mitigate the spread of pathogens. While the efficacy of current standardized approaches is a subject of ongoing discussion, experiences and documented lessons learned provide a concrete basis for preparedness among high-risk communities, including those in African countries.

During the COVID-19 pandemic, the extent to which African countries implemented standardized preparedness and response activities varied considerably, correlating with their respective geopolitical, economic and social characteristics. It is important to note that a country's geopolitical characteristics significantly influence its preparedness and capacity to address pandemics, impacting health policy formulation, prioritization of health interventions, securitization of health threats and protection of citizens. For example, policy-advanced states like Uganda may prioritize securitization of all health threats, allocating substantial resources to border control and preparations for future lockdowns. In contrast, scientifically advanced African states may focus more on strengthening health systems. Meanwhile, other African states may be in earlier stages of developing health policy frameworks, developing information systems for preparedness and building capacity for pandemic preparedness initiatives.

Post-COVID, global, continental and national institutions have drafted and modified health policies<sup>4</sup> and strategies to enhance responses to pandemics. Global health actors, such as the WHO and United States Agency for International Development (USAID), along with the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH), in partnership with major Pharmaceutical companies, have encouraged African countries, including Uganda, to refine their health policies and devise methods to address health threats of global concern. While some African countries have adopted WHO approaches focused on improving evidence generation, securitization and health system strengthening, others, like Senegal, South Africa and Ghana, have strategically prioritized enhancements in diagnostics and health system capacity. This demonstrates the diverse approaches to strengthening pandemic preparedness across the continent. These variations are often influenced by in-country social, geopolitical and economic factors.

At the global level, frameworks, scientific committees and research entities have been established by the WHO. Several propositions have been reiterated, including securitization as an approach to addressing pandemics and leading vaccine trials, which encourage countries to reinforce or establish National Institutes of Public Health to ensure rapid data sharing and the generation of real-time evidence. In this context, the Africa Centers for Disease Control (AfCDC) launched a framework in July 2024 to promote the resilience of the African continent against pandemics. Although there are pockets of post-COVID interventions across the continent, existing research on the

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4 Health policies are basic documents which guide any health intervention and response. The health policy frameworks are revised -in some countries every five years.



scale, focus and efficacy of these interventions is limited. Consequently, this policy paper aims to illuminate these issues through primary and

secondary research, generating evidence-based policy options to enhance resilience for pandemic preparedness in Africa.

## Methodology: Desk review and rapid ethnography

Data was collected through desk reviews, participation in global health webinars, ethnographic techniques such as interviews and group discussions and observation of some port health activities. These techniques enabled us to gather valuable evidence highlighting variations in the efficiency and practicability of pandemic preparedness initiatives globally and across African countries and to propose ways various actors can engage with local empirical evidence to address existing challenges.

The entry point was interviews with key health policy actors to assess various stakeholders' understanding and initiatives regarding future preparedness. Interviews were conducted with senior officers at the Ministry of Health (MOH), disease responders, health policymakers, global health representatives from the WHO, CDC and United Nations Children's Fund (UNICEF) and humanitarian partners in Uganda, South Sudan, the Democratic Republic of Congo, Liberia and Senegal. Given past experiences with pandemic preparedness and response, the main question was: What can be done to enhance future preparedness? Rapid ethnography was appropriate for this study due to time constraints within which all data had to be collected, transcribed, analysed and a report written. Key actors were purposely selected in health policy making/modification and disease response.

In Uganda, key actors worked at the Ministry of Health, the National Emergency Operation Centre (NEOC) and the clinicians interviewed had participated in past epidemic/pandemic disease responses. In total, interviews and Zoom calls were conducted with 18 actors (n=18): Uganda (n=9), DRC (n=2), Kenya (n=3), South Sudan (n=1), Senegal (n=1), Liberia (n=1) and Ghana(n=1). Documenting clinicians' points of view enriched our understanding of interventions guided by existing health policy. Moreover, if there are differences between what clinicians propose and the outcomes in policy modification for future preparedness, we explored their perspectives on the best approaches for future pandemic preparedness.

Secondary data on responses to past pandemics and 'lessons learned' reports were collected through desk-based research. The study reviewed countries' reports documenting past experiences in addressing COVID-19, along with policy briefs and journal articles. Additionally, I participated in global and in-country webinars focusing on pandemic preparedness, including WHO-organized webinar on Disease X in early 2023. Another technique for assessing pandemic preparedness at the borderlands in the East and Central African Region involved site visits at Points of Entry (POE) to explore future preparedness initiatives.

## Overview of global, regional and national initiatives for pandemic preparedness post-COVID-19

The key actors at the forefront of global pandemic preparedness include the WHO, United Nations (UN), governments and philanthropists. Considerable variations exist in pandemic preparedness and planning at this level. Europe and North America frequently engage in unified debates and jointly strategize regarding potential future outbreaks, such as those that could be caused by Disease X<sup>5</sup>. The principal approaches to pandemic preparedness include investing in vaccine trials, isolating virulent pathogens, securitization and conducting studies with pre-approved protocols in settings with a history of outbreaks.

Before COVID-19 and drawing from lessons learned during the West African Ebola epidemic (Kamradt-Scott 2012), the WHO and humanitarian organizations proposed the securitization of health threats. In this context, pandemics have been reframed as security matters, allowing affected states to justify security spending for health financing (Wenham 2019; Kirk et al. 2021; Kamradt-Scott 2012). During COVID-19, the WHO also proposed lockdowns, quarantines, heightened surveillance and mandatory vaccination to ensure that no one is left behind (see Akello 2024). The approaches of these global actors significantly shape continental strategies, which are prioritized and appropriated differently across regions, influenced by local, cultural, geopolitical and economic

capacities. Post-COVID, the WHO's repertoire of standardized approaches for pandemic preparedness is becoming increasingly complex, now including vaccine trials, more pre-approved studies and additional therapeutics, laboratory and diagnostics methods.

At the African continental level, the key actors are the AfCDC, the WHO, the AU and its various member states. While these actors may share a unified agenda on pandemic preparedness, African member states independently adapt their preparedness approaches to their specific contexts. Some African countries, particularly those facing significant socio-economic and political challenges, address the issue of pandemic preparedness only minimally. The AfCDC (Africa CDC, 2024, July) launched a new strategic framework aimed at strengthening cross-border surveillance and information sharing across the AU member states. This framework supports the sharing of information about health threats and prevents cross-border public health risks continent-wide. Furthermore, the framework advocates for a multi-sectoral approach to addressing health threats, encouraging collaboration among ministries of health, environment, trade, immigration and foreign affairs, as well as work together with the National Public Health Institutes. Additionally, the AfCDC plans to create a network of sub-regional clinical and public health laboratories to support



member states' public health emergency preparedness and response plans, as well as to strengthen national and regional health science data surveillance systems (Nkengasong, Maiyegun and Moeti 2017).

At the country level, although some nations face challenges in developing comprehensive health policies, many African countries have established health policies to guide the provision of health services to their citizens, as well as preparedness strategies. Health policies serve as foundations for health strategic plans in which countries allocate budgets according to priority areas. Within these health strategic plans, opportunities for improvement exist, particularly in addressing pandemics, largely due to limited health financing. Post-COVID, African countries have adopted some or all of the WHO's guidelines for pandemic preparedness. Geopolitical, economic and cultural characteristics influence the pandemic preparedness strategies selected by each country. Among African countries, there are three key groups<sup>6</sup>: policy-advanced, fragile and scientifically advanced African states.

Generally, authoritarian states tend to prioritize securitization, border-point surveillance and militarization. Post-COVID-19, national health policies in countries such as Uganda, South Sudan, Rwanda and Kenya include approaches like National Public Health Institutes managed by the military, border-point surveillance and partnerships aimed at financing securitization strategies to address health threats of global concern. These policy modifications were supported by external funding and policymakers maintain that apolitical, value-free evidence was

the basis for the changes. For instance, many African countries' health policy revisions post-COVID-19 were supported by the USAID, DfID, NIH and CDC. However, in reality, in-country policymaking processes are often influenced by Western models (Onyango 2022; Akello & Parker 2022; Akello 2024). When external actors fund national health policy formulation and modification processes, the outcomes may not adequately support local initiatives. This is because a significant proportion of global health actors aim to conduct value-free, apolitical and extractive studies. The evidence derived from such studies may be de-politicized and de-contextualized, which may limit its contribution to localized or contextualized pandemic preparedness.

In contrast, fragile African states like Somalia, Liberia, the DRC and Sierra Leone face challenges in developing comprehensive health policies and, as of post-COVID-19 (senior academic, personal communication, August 2023), frameworks to guide pandemic preparedness. Due to insecurity, major portions of their budgets are directed toward addressing conflict. Populations in fragile states, having been displaced from their livelihoods, live in precarious conditions and are at risk of exposure to emerging and re-emerging infectious diseases.

Policy-advanced African states have recently modified their health policies, post-COVID-19, to support securitization. Countries like Uganda, Rwanda and Kenya tend to focus on securitization of health threats (Kirk et al. 2022). For example, in preparing to address pandemics, Uganda opted for the securitization

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6 To improve our understanding of the status quo for preparedness in Africa, we broadly classify African countries into 1) scientifically advanced states, 2) policy-advanced states and then 3) fragile states. The categorisation of African countries is premised upon their contemporary geopolitical, economic and frameworks adapted for pandemic preparedness.

of health threats; consequently, every health threat is redefined as a security issue. In this view, substantial budgets are allocated to the defence ministry to set up disease surveillance centres at key border points. Policy-advanced African states have also developed militarized National Public Health Institutes that support pre-approved studies for real-time evidence generation should pandemics emerge (Akello 2024). Here, international scientists conduct these pre-approved studies with the support of local Institutes of Health. The push for pre-approved studies as a pandemic preparedness measure has been criticized as a Western-centric approach that may not fully address Africa's needs and priorities.

From the global repertoire of pandemic preparedness, scientifically advanced African states have selected policy guidelines for health system strengthening, improving diagnostics and therapeutics and conducting trials aimed at isolating virulent pathogens. In this regard, their health policy regimes manifest through significant investments in hospitals, financed studies to isolate various filoviruses and other zoonotic diseases and various diagnostic and vaccine trial studies. For example, in mid-June 2023, Ghana, Nigeria and South Africa demonstrated substantial investments in health centres as part of a pandemic preparedness strategy.<sup>7</sup>

### Status quo concerning pandemics in Africa

Generally, all health policy regimes, including securitization, health system strengthening and improving diagnostics, are guided by the WHO. Subsequently, African countries select and prioritize certain health policy regimes over others based on their specific needs and contexts. This policy paper analyses how a country's current political situation influences its selection of policy aspects for pandemic preparedness. The health policy-making efforts are then linked to broader aspects of future pandemic preparedness plans. As classified above, African countries can be categorized as follows: 1) Scientifically advanced states (e.g., South Africa, Ghana, Nigeria, Senegal,

Egypt), 2) Health-policy advanced states (e.g., Uganda, Kenya, Rwanda, Tanzania) and 3) States facing significant socio-economic and political challenges (e.g., the DRC, South Sudan, Ethiopia, Somalia, Sierra Leone, Eritrea). These classifications of African states are for conceptual and analytical purposes only; some countries may exhibit more positive characteristics than others, even when aggregated. For clarity, the terminologies adapted are broad classifications, with key parameters including political stability, the nature of political governance - whether democratic or authoritarian, economic governance and the art of health policymaking.



This policy brief amplifies characteristics in the three-member state categories to illustrate their importance for future preparedness. For states experiencing instability and conflict, it will demonstrate how factors such as armed conflict, securitization, diversion of health budgets, frequent displacements and settlement in refugee camps are critical frontiers for emerging and re-emerging and infectious disease pandemics. As mentioned above, policy-level differences exist among African countries such as South Africa, Ghana and Nigeria, whose Ministry of Health websites in 2023<sup>8</sup> show a prioritization of pandemic preparedness through initiatives like building more hospitals, supporting vaccine research and training additional clinicians. The health policy initiatives that support core pandemic preparedness approaches signify a stronger readiness to address future health threats.

## Health policy-advanced states

Policy-advanced states are frequently authoritarian. Generally, they prioritize securitization, heightened surveillance, pre-approved studies and militarization. Under the influence of global health partners, including USAID, DFID and pharmaceutical companies, locally-driven approaches may sometimes be overlooked (Akello 2024). For example, during the COVID-19 pandemic, while Uganda and many other African countries believed that enforcing strict border-control measures would prevent the entry of infected individuals, the reality is that many African nations share porous borders. Specifically, apart from two border points between Uganda and the DRC, the over

400km radius of the shared border is riddled with informal paths through which nationals travel across countries without restrictions. Therefore, there is limited evidence to confirm the efficacy of border restrictions as a pandemic preparedness approach in Africa. In 2018, many travellers from the DRC freely used these informal routes, engaging in trade and seeking healthcare, while school-age children from the DRC accessed formal education in Ugandan schools throughout the quarantine and strict surveillance period (Bedford & Akello 2018). Similarly, while South Sudan required negative tests and proof of COVID-19 vaccination from travellers long after other countries had shifted their focus away from COVID, millions of South Sudanese refugees intermittently crossed into Uganda during COVID and throughout the years 2021 - 2022. Thus, the securitization policy regime appears to be a value-free, context-free and apolitical strategy for fragile and policy-centric African countries.

In effect, with securitization, all health threats are reinterpreted as security threats. To contain disease outbreaks, countries will deploy their budgets and military resources. To appear democratic, they may invest heavily in policymaking and modification, subsequently offering a legal framework for their activities. In this regard, Uganda has significantly modified its health policy since 1999. The primary outcome of the health policy modification process is three versions of Uganda's Health Policy, codenamed Uganda's Health Policy [MOHI, MOHII and MOHIII] which include provisions for pandemic preparedness post-COVID, such as securitization, partnerships and the declaration of a state-of-emergency for health threats.

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8 See [www.health.gov.za](http://www.health.gov.za), [www.moh.gov.gh](http://www.moh.gov.gh), [www.health.gov.ng](http://www.health.gov.ng).

Notably, during the COVID-19 pandemic, when the world came to a standstill, humanitarian efforts to address the crisis on behalf of the affected states were impacted. However, policy-driven states utilized humanitarian frameworks to emphasize Infection control and prevention, securitization and heightened surveillance. These nations had to innovate and address the pandemic with the resources available, albeit within resource-constrained health systems and inadequate hospitals (see Akello & Beisel 2019). Post-COVID policy modification was supported by global health partners, including pharmaceutical companies, development agencies and policymakers who participated in shaping the policy landscape.

Post-COVID, the process of revising Uganda's MOHII to generate MOHIII in 2022/2023 was supported by the United States Agency for International Development (USAID)<sup>9</sup>. To enhance pandemic and virulent disease response activities, Uganda's health policy includes provisions for securitization, the declaration of emergencies for health threats, renaming some parallel systems into the MOH, such as changing the National Emergency Operation Centre (NEOC) to the National Public Health Institute (NPHI) (MOH, Uganda, 2023). Furthermore, the revised Health Policy regarding pandemic disease response, states in Article 3.4.3: Policy Objective 3 of MOHIII that it aims to strengthen the health system's capacity for disease, surveillance, pandemic (epidemic) and disaster preparedness and response by deploying the military (ibid.). Additionally, under Article 3.1, the health sector shall establish a NPHI. The NPHI is emerging from the NEOC, a militarized parallel institution

designed to support the MOH and coordinate emergency disease responses between the president's office and global health actors.

The potential consequence of this externally-influenced health policy regime is that international researchers can access risk communities without subjecting their protocols to ethics clearance. The stated intention is that doing so will allow researchers to generate real-time data about health threats. In MOH Uganda (2023), the CDC's priority of collecting various human samples is addressed in clause 3.4.3. By providing for and stating the need to strengthen national public health laboratory and diagnostic services, the capacity for scientific containment of diseases, particularly infectious diseases, can be enhanced. This includes disease surveillance, diagnostic development and testing.

In an interview with a senior officer from a newly created NPHI, he explained the mandate as follows:

*This NPHI in Uganda has been established to promote real-time scientific evidence that will guide epidemic and pandemic preparedness and response. In the past, especially during COVID-19, our response was hindered by a lack of scientific evidence. However, with this institution (NPHI) if Uganda faces a pandemic, many scientists will be able to analyse data, analyse samples and provide sufficient scientific information about the disease.*

**- In-depth interview 2023, MOH, Uganda.**

Further, the NPHI is a global health initiative proposed to all risk and pandemic-prone countries in Africa by WHO Africa and the CDC. It

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<sup>9</sup> The USAID works in collaboration with major health scientific research organisations, including the Centers for Infectious Disease Control (CDC-USA and by extension CDC-Africa), Infectious Disease Institute (IDI), National Institutes of Health (NIH) and a pharmaceutical company Pfizer.



was adapted following the COVID-19 pandemic, addressing the challenges posed by managing misinformation and the infodemic during that period. The NPHI will not only facilitate the generation of real-time information but also manage the process of generating scientific evidence when different countries face infectious disease threats.

While scientific evidence regarding any pandemic is vital for preparedness and containment, some ethical issues may arise from this plan, which focuses on generating scientific evidence as an approach for pandemic preparedness and response. Here is how one policymaker in Uganda described his experience:

*.... I have been involved in this virulent infectious disease response for over 15 years and what I have witnessed is shocking. If I were to wake up one morning and announce that Uganda has an outbreak of Ebola in one of its regions, even if the announcement is false, donors would suddenly come to us with millions of dollars for response activities. From the vertical fund – which they manage themselves - you would see numerous posters, millions of PPEs, thermometers and personnel to distribute them. Some technical experts would be flying in and out of the country, some of whom you cannot be sure about what they have come to do.*

*But no matter how many meetings I call or invite I send out to donors, no one will come to engage in a discussion on systems strengthening as an approach to pandemic preparedness. There is a noticeable lack of interest in this area.*

**- In-depth interview, 2023, MOH, Uganda.**

As a result, a disconnect in prioritization and health financing at national and global levels has led to a situation in which considerable resources are invested in short-term approaches,

also known as reactionary measures. If resources were instead invested in strategic long-term approaches like systems strengthening, clinicians, local communities and global financiers alike would reap greater benefits.

### **Policy provision to declare a state of emergency - for any health threat**

Although post-COVID, policy advancements in states' health provisions for tackling health threats including pandemics allow for declaring a state of emergency, Kizza (2007) described how vertical funds are disbursed when a country makes such a declaration. Generally, donors allow over 80% of their vertical budget to selected approaches in pandemic preparedness but only 15% of the overall development aid fund to 'development' issues, including systems strengthening. Yet, *"if health systems are strengthened, for instance to the extent that all diseases can be managed there, then there will be no need for emergency and reactionary responses."* This perspective was shared by a senior officer at the MOH, Uganda, during an interview.

Furthermore, during an in-depth interview regarding Uganda's health policy provision to tackle one health threat at a time after declaring a state of emergency, one officer at the MOH recounted his experience:

*When I see how much is spent during a disease emergency like COVID-19, I ask why there is such a difference in local and donor prioritization. First of all, during a pandemic, all resources are channelled to one disease and there is so much focus on that one disease alone – even when many people are still dying of other diseases like malaria, HIV/AIDs. The funds spent in donor meetings, coordination, on temporary, make-shift structures are equivalent to what we need to build a state-of-art hospital which no donor will provide.*

*There is therefore an urgent need to invest in an in-built permanent structure and not temporary structures. In short, reactionary responses must be stopped and we will instead strengthen our health systems for pandemic preparedness in ways that they will be sustained.*

**- Interview, August 2023, MOH, Uganda.**

If investing in strong functional health systems is an effective way to prepare for pandemics and indeed donors, development partners and pharmaceutical companies can support this investment, the question that arises is why Uganda, together with its global health partners, continues to practice reactionary responses for decades. Is the answer vested interests and attempts by each actor to attend to their own priorities? Could a relational approach between Uganda or African countries and their global health partners ignite another form of dialogue?

In summary, major discrepancies exist between the priorities of global health actors and local strategies for preparing for and tackling future pandemics. For instance, the emphasis on standardized disease response pillars neglects local structural and budgetary challenges. Since 2023, the trend has been to conduct pre-approved studies during pandemics for preparedness. It is argued that these pre-approved studies will provide real-time evidence to tackle future pandemics. To a great extent, there are overlaps in the strategies of authoritarian states and global health actors regarding pandemic preparedness. However, neglecting local existential evidence and health priorities has created a policy space inconsistent with local needs. Furthermore, in early 2024, WHO R&D held global digital meetings to prepare for future pandemics; the priority for the African continent was data-sources, particularly in a region with various filoviruses for isolation and vaccine trials.

## Scientifically advanced African states

Scientifically advanced states have prioritized policy regimes to strengthen health systems and improve diagnostics for pandemic preparedness. Post-COVID, their national health policy provisions are evident in ministry reports from 2023 (MOH South Africa, 2023; MOH Ghana, 2023; MOH Nigeria, 2023). For instance, Ghana officially opened a state-of-the-art hospital in Accra in June 2023 – as a pandemic preparedness strategy (MOH Ghana, 2023). In this hospital, advanced diagnostic equipment has been installed and a substantial number of staff have been recruited to conduct diagnostic studies. Furthermore, the 2024 report from the MOH Ghana indicates the construction of a 597-bed University Hospital in Legon. In addition, Ghana reports an advanced national medicine plan that encompasses governance, strategic purchasing, selection of medicines, global trade, research and development and quality assurance (MOH Ghana, 2017). Similar health system investments were reported on the South African and Nigerian webpages in mid-2023. For example, Nigeria's MOH (2024) has implemented a four-point agenda focusing on governance, improving population health outcomes, enhancing the healthcare value chain and ensuring health security for all Nigerians.

In summary, significant investments in the health sector aim to strengthen health systems through improved staffing, diagnostics and therapeutics. Prioritizing health system strengthening to manage current health threats and anticipate future pandemics appears to be a productive strategy. An academic in Senegal confirmed the importance of prioritizing health system strengthening:



*If the countries' line ministries can prioritise strengthening health systems' many lives can be saved through dealing with the early diagnosis and effective management of symptoms caused by viral diseases, even filoviruses.*

**- Interview, August 2023, Academic, Senegal**

Strong health systems, as argued by Kim et al. (2018), provide a concrete framework for infectious disease response. Such systems feature real-time diagnostics, quarantine facilities and trained health workers to tackle virulent disease outbreaks. While some shortcomings may exist, countries faced with pandemics can leverage their existing manpower, resources and diagnostic facilities to contain outbreaks effectively.

Although WHO and other global health partners will propose global health policy regimes and direct major pandemic preparedness initiatives and responses, standardized disease response activities, including coordination, surveillance, case management, infection prevention and control (IPC) and quarantine the repertoire of response activities may only serve to complement in-country efforts.

Using COVID-19 as a case study, in-country disease response initiatives tended to override externally conceived ideas regarding efficacy and effectiveness. Countries with better-performing health systems, reinforced by sufficient health financing and guided by effective health policy, such as South Africa and Nigeria, are presently engaging in advanced diagnostics (e.g., isolating pathogens like the Omicron virus), manufacturing vaccines and implementing drives to eradicate virulent pathogens.

Thus, the idea that member states must create NPHIs neglects the fact that some African

states already have similar research bodies with functional equivalence. In effect, creating NPHIs as an initiative for future preparedness, as recommended by WHO and global health partners, can be integrated into in-country science institutes. These in-country science institutes will then promote real-time evidence generation should such studies be required. Furthermore, local scientists will design appropriate protocols to advance knowledge and improve preparedness.

## States facing significant socio-economic and political challenges

Some states, such as the DRC, Somalia, Eritrea and Liberia face significant challenges in developing and implementing comprehensive health policy frameworks to guide future preparedness, even after the COVID-19 pandemic (personal communication, 2023, from academics based in DRC, Liberia and Somalia). There have been limited reported efforts to adapt or select from the various health policy regimes provided by WHO. Typically, countries facing significant socio-economic and political challenges are confronting armed groups experiencing political instability and the majority of their citizens are refugees in neighbouring states. They have limited capacity to verify and assess the initiatives of scientists and global health actors, including monitoring the activities of pharmaceutical companies conducting pre-approved product development studies.

A substantial proportion of citizens from states including DRC, Somalia, Ethiopia, Sudan and South Sudan are displaced from their livelihoods, have become refugees and live in refugee settlements. People affected by war are at increased risk of exposure to pandemics. Due to

their displacement, they may face challenges in accessing or implementing a repertoire of disease containment measures.

As a strategy to address the health needs of refugee populations should a pandemic emerge, the regional committee for pandemic

preparedness (constituted by AfCDC) should prioritize the safety of refugees and war-affected individuals. There is a risk that vulnerable populations could be exposed to various pre-approved studies that may be extractive, value-free and unethical.

### Modifying health policy for improved pandemic preparedness

Although evidence-based health policymaking is generally considered apolitical, the production, interpretation and use of scientific evidence are value-based, contested and influenced by structures, politics and power. African states and global health actors have different priorities and recommendations for future pandemic preparedness. Consequently, there is a need for a relational approach in drafting strategies for future preparedness in Africa. While most African states possess the existential evidence that could serve as a foundation for effective pandemic preparedness, they may lack the full range of resources needed to execute their strategies. On the other hand, global actors and pharmaceutical companies have resources but may prioritize differently. If global health partners are more focused on conducting research and generating scientific evidence, these two priorities can coexist through a mutual redesign, where global health partners support health systems strengthening in African countries and African National Public Health Institutes support scientific research for pandemic preparedness. Lakoff (2017) remarks that despite significant investments in pandemic preparedness

initiatives, the world remains underprepared, which resonates with the observation that funds are directed towards priorities – such as isolating flaviviruses, vaccine trials and pre-approved studies – that are conceived from outside. Could this be because the standardized approaches are not always fully aligned with actual localized preparedness activities, including systems strengthening? Could it also be that some authoritarian states have invested in the securitization of pandemic preparedness?

Generally, effective pandemic preparedness initiatives and responses require substantial budgets and the existence of reserve funds. A few pandemic-prone African countries, such as Uganda, South Sudan, Somalia and Liberia, face resource constraints – hence the need to partner with global health actors. Partnerships, if equitable, hold significant potential for effective preparedness initiatives. However, the findings suggest that partnerships are often inequitable, context-free and neglect local needs. This trend is evident (see Onyango 2022, Akello & Parker 2022) when some countries in the global South facing health threats declare a state of health



emergency to facilitate interventions designed by global health actors, including pharmaceutical companies and infectious disease researchers. Global health partners have the potential to exploit vulnerable populations by conducting extractive, depoliticized, exploitative and unethical studies on these groups. This is why I strongly advocate for strengthening Africa's ethics committees at national and regional levels as part of a comprehensive pandemic preparedness strategy.

Efficacious pandemic preparedness approaches must be multi-pronged, following WHO's policy regimes while prioritizing health system strengthening, improving diagnostics and redesigning global health partnerships to ensure that all stakeholders, including countries facing significant socio-economic and political challenges experience equitable collaborations. In addition, early warning signs and effective surveillance can be enhanced through community engagement. However, empirical evidence shows a disconnect and power imbalance between global, continental and national initiatives (Akello & Parker 2022, Akello 2024) in preparing to address pandemics. For instance, while global health policy initiatives emphasize securitization, real-time research and policy modification, local health needs predominantly focus on systems strengthening. Furthermore, due to geopolitical, economic and political differences within countries, African nations have prioritized various health policy regimes while de-prioritizing others.

**Health policy in advanced African** countries like Uganda and Rwanda typically invest in policy development and integrating military into pandemic preparedness plans. Evidence indicates that Uganda's Ministry of Health (MOH 2023) has modified its policies with the support

of USAID and other development partners. One key outcome has been the prioritization and equipping and militarising of NPHIs and adapting policy aspects to support the securitization of border points and conducting pre-approved studies. Political governance often serves as a predictor of the approaches taken towards readiness and preparedness to address future health emergencies. Although authoritarian states tend toward securitization, policy developments and the integration of military resources into standardized approaches; (Leach et al. 2022, MacGregor et al. 2021) also highlight the limitations of these strategies, illustrating that no single strategy fits all contexts. For example, unlike other Western countries that experienced the COVID-19 pandemic severely, Uganda's COVID-19 cases were predominantly mild and asymptomatic (GOV 2020, Akello 2020, Bogere et al. 2022, Bongomin et al. 2021, Akello & Parker 2022). Nonetheless, Uganda's pandemic preparedness and control efforts reflected global perspectives. Local epidemiological evidence was overlooked in favour of securitization of pandemic preparedness and response approaches, leading some citizens to perceive these measures as oppressive rather than addressing their immediate priorities (Akello 2024). Thus, there is a pressing need to prioritize health financing and improve local health systems.

**Scientifically advanced African states:** If all health-related interventions, including pandemic preparedness, are mediated by health policy, then scientifically advanced and relatively wealthy states like South Africa, Nigeria and Ghana prioritize strengthening health systems and improving diagnostics. These countries exemplify proactive pandemic preparedness plans through system strengthening and prioritizing vaccine trials for filoviruses and other

virulent pathogens. Should a health threat of global significance emerge in the future, they are well-positioned to address it independently or with the assistance of other global health actors. Notably, global health actors may need to support these countries' existing and localized research agendas

**States facing significant socioeconomic and political challenges** face significant challenges that hinder their ability to adapt or modify their local policy regimes for pandemic preparedness. With weak political systems or governance challenges and a substantial proportion of their populations living as refugees, they are at increased risk during disease pandemics like COVID-19. These systemic challenges may create opportunities for international scientists to conduct real-time studies in such settings, potentially exposing at-risk populations to potentially harmful research, including numerous

pharmaceutical and vaccine investigational studies. Some studies, which do not directly enhance our understanding of pandemics, include the collection of samples, such as semen from survivors, as reported in the DRC. Unless mechanisms for monitoring and deterring such studies are prioritized, fragile countries remain at risk of numerous pharmaceutical, vaccine and other investigational studies, along with deleterious effects. I propose that African-wide and regional institutions such as the AU, SADC, EAC and Africa CDC establish a regional research ethics committee to scrutinise global health research conducted in fragile states. Such committees could assess the feasibility, beneficence, relevance and potential effects of the proposed studies on at-risk populations.



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