

The role of Africa Centres for Disease Control and Prevention during response to COVID-19 pandemic in Africa: lessons learnt for future pandemics preparedness, prevention, and response

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INTRODUCTION

The African continent has been highly affected by recurrent emerging and re-emerging public health threats, including Ebola, Marburg, Mpox, Measles, Dengue Fever, Cholera, COVID-19, and others, which have adversely affected the lives and livelihoods of the African people.^{1 2} Despite decades of recurring outbreaks, the African public health emergency management system is characterised by a limited capacity to prevent, detect, and respond to the outbreak, including the poor governance and coordination of the already fragile health system and limited health workforce to respond to the outbreaks early.^{2 3}

The 2014–2016 Ebola Virus Disease outbreak in West Africa was the catalyst that accelerated the commitments that led to the establishment of a continental public health agency as it exposed the weakness of health systems in affected countries and the challenges of mounting well-coordinated regional and continental responses.⁴ African Heads of State and Government launched the Africa Centres for Disease Control and Prevention (Africa CDC) on 31 January 2017, to strengthen public health institutions' capacity to prevent, detect, control, and respond quickly and effectively to disease threats.

Africa CDC, the only continental Pan-African health institution, is mandated to oversee and support the implementation of the New Public Health Order,⁵ which consists of five key elements: strengthening public health institutions on the continent; strengthening the Public Health Workforce;

expanding the local manufacturing of vaccines, diagnostics, and therapeutics; increase domestic financing for health; and developing respectful and action-oriented partnerships.^{5 6} Consequently, the Africa CDC has been rigorously working to support public health initiatives of Member States and strengthen the capacity of their public health institutions to prevent, detect, control, and respond quickly and effectively to disease threats and outbreaks. As such, the African CDC was better positioned to deal with COVID-19 during its emergence.

LESSONS LEARNT FROM THE RESPONSE TO COVID-19 PANDEMIC

Although the acute phase of the COVID-19 pandemic has been declared over, as stated by the WHO, its impact remains challenging to the health system. Despite the continued reports of COVID-19 cases and deaths globally, the testing capacity and case detection are not getting due attention in Africa. Thus, it is critical to reactivate the interventions and capitalise on the lessons learnt thus far to address the ongoing burden and prepare for future pandemics.

When we speak about pandemic preparedness and response, high-level political will and commitment are priorities. Leadership and governance at all levels were key during the pandemic response. The Africa CDC played a critical coordination role by convening the first high-level emergency meeting of Ministers of Health with a clear roadmap on 22 February 2020, just a week after the first COVID-19 case was reported on

the continent. This pivotal moment rallied all 55 African Union (AU) Member States at the highest level to the fight against the looming threat. The aforementioned effort was significantly complemented by the continuous engagement of AU Heads of State and Government.

Africa CDC and AU Member States initiated the pandemic preparedness early when the outbreak was still mostly confined to China;⁷ these initial preparations were focused on surveillance and case management, supply chains, and laboratory systems. Early assessments during this period revealed that laboratory capacity was still inadequate, with only two countries able to diagnose SARS-CoV2—South Africa and Senegal in February 2020. The Africa CDC co-organised with Senegal and South Africa, to provide practical training of laboratory experts from all AU Member States in multiple rounds; and provided an initial supply of test kits and dramatically improved SARS-CoV-2 detection between March and April 2020.⁸ Africa CDC also worked to address other bottlenecks, including critical medical supplies for the response and bridging the lockdown with air transport, especially for medical supply cargos, working with the Ethiopian government, Ethiopian Airlines, and the World Food Programme to deliver critical life-saving medical supplies including diagnostics and personal protective equipment. Perhaps we could add two important AU initiatives: Africa Vaccine Acquisition Trust (AVAT) and Africa Medical Supplies Platform (AMSP).^{9,10}

African Vaccine Acquisition Trust

Under the circumstances, there was a need to have a pooled procurement platform to ensure equitable access to vaccines by all AU Member States. This led to the creation of the AVAT. This special-purpose vehicle serves as a central entity for negotiating, procuring, and paying vaccines and acts as the interface between AU Member States and the vaccine manufacturers.

Africa Medical Supplies Platform (AMSP)

AMSP is a not-for-profit initiative launched by the AU as an immediate, integrated, and practical response to the COVID-19 pandemic, to facilitate access to an African and global base of vetted manufacturers. The platform enabled AU Member States to purchase certified medical equipment such as diagnostic kits, PPE, and clinical management devices with increased cost-effectiveness and transparency. AVAT mandated the AMSP to support the ordering and allocation process for the vaccine procurement mechanism. The AU and the Africa CDC mechanisms have delivered medical countermeasures, including diagnostics, therapeutics, vaccines, and infection prevention and control supplies worth over \$550 million.¹¹

Therefore, as we prepare to respond to future pandemics, the public health community should engage high-level political leaders in discussions about the impacts and strategies to respond to pandemics. More importantly, the public health community needs to work

towards improving the awareness of the political leaders through targeted advocacy and continuous sensitisation regarding the impacts of a pandemic and strategies for future pandemic preparedness and response.

Another critical lesson that can be learnt from the COVID-19 pandemic response in Africa is the role of respectful and action-oriented partnerships with international agencies, partners, and philanthropies. The establishment of Africa CDC as a Pan-African Agency has provided an opportunity for the cocreation of exemplary partnerships to boost the capacity of AU Member States to respond to the pandemic and other public health emergencies. One of the partnerships cocreated between Africa CDC and Mastercard Foundation, designated as ‘Saving Lives and Livelihood (SLL)’ has played a pivotal role during the pandemic response.¹² This \$1.5 billion collaborative and action-oriented partnership is aimed at strengthening the capacity of Africa CDC to implement the New Public Health Order in general and pandemic response specifically. The SLL programme was created at a high moment when access and availability of COVID-19 vaccines were limited in Africa due to a shortage of finance, delayed vaccine deployment due to issues of export bans and other geopolitical tensions, and compromised critical last-mile capabilities. The SLL programme was spectacular in purchasing and delivering vaccines, enhancing vaccine uptake, and strengthening the capacity of Member States and public health institutes, thereby contributing substantially to the mitigation of the pandemic’s impact on the lives and livelihoods of African people.¹²

The COVID-19 pandemic has also clearly exposed the fragility of the health system in general and the public health surveillance system specifically. This has created an opportunity to build digital health systems and establish electronic data management and visualisation systems in Africa CDC and African countries to support informed decision-making and response. More importantly, active data-sharing systems were remarkable. As we transition from the acute phase of the COVID-19 pandemic, sustaining these digital health investments is critical. Learning from the COVID-19 pandemic, countries need to invest more in health informatics workforce, information technology infrastructure, and data quality improvement initiatives to prepare for the future pandemic.

The coordination role of National Public Health Institutes (NPHIs) during the response to the COVID-19 pandemic was also spectacular. The NPHIs were able to coordinate the essential public health functions of surveillance, laboratory systems, research and data, public health workforce, and incident management system through the public health emergency operation centre (PHEOC). Learning from the Ebola outbreak in West Africa and the COVID-19 pandemic, the Africa CDC is supporting Member States to establish an NPHI with a functional PHEOC. PHEOC is a physical hub to coordinate response activities, including human, logistics, and financial resources, to respond to public health

emergencies.¹³ The capacities of the PHEOCs in Africa are still limited, hence the need for PHEOC policies, plans and procedures, staffing (permanent and surge), information (data) management systems, communication technologies, and physical infrastructure.¹⁴ Thus, we suggest that Member States prioritise the establishment and strengthening of NPHIs and continue working on the sustainability and functionality of their PHEOCs.

CONCLUSIONS

Learning from the hard-fought gains during the COVID-19 pandemic is critical as we prepare for the future pandemic. High-level political commitment at all levels and the cocreated respectful, action-oriented partnerships are remarkable in effectively and timely responding to public health emergencies. African health systems must be agile and flexible to accommodate their respective countries' and the continent's emerging and evolving needs. Digital health interventions and the coordination roles of NPHIs have played pivotal roles in the pandemic response and they need to be sustained by increased investment in the health workforce and resources.

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