



COVID-19 response: Experiences from East Africa

Key messages

- COVID-19 restriction measures resulted in school closure which was associated with depression among school going children.
- Vaccination was associated with better clinical outcomes, while community involvement was key in increasing vaccine acceptance.
- Lab quality management systems were a critical tool in enhancing overall laboratory functionality preparedness for epidemic/pandemic response.
- Community mask wearing and banning of public gathering were key measures implemented in containment of the virus. However, social distancing was poorly implemented driven by social economic reasons.



Background

Since its emergence in Wuhan, China on 8 December 2019[1], severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) continues to rapidly spread globally. The infectious virus has disrupted and overwhelmed health care systems, trade, social systems and has been associated with millions of infections and deaths worldwide. To date, there have been multiple waves of COVID-19 epidemics associated with various variants[2,3].

As of 1 December 2021, 262,178,403 million people have been infected worldwide, with 5,215,745 million deaths reported[4]. Major SARS-CoV-2 lineages of concern include - Alpha (B.1.1.7), first reported in the United Kingdom; Beta (B.1.351), first reported in South Africa; Delta (B.1.617.2) first seen in India; and Gamma (P.1) first seen in Japan/Brazil. They have all been associated with significant infections, mortalities and social economic disruptions worldwide[5]. The most recent variant of concern to be reported is the B.1.1.529 (Omicron) variant first identified in South Africa and Botswana in November 2021. As of 3 November 2021, the variant had been detected in 38 countries.

Multiple COVID-19 infection waves have been experienced in the Africa since the detection of the first case in March 2020. The first infection peak was observed in August 2020 and was mainly attributed to the relaxation of public health

restriction measures earlier imposed. Second and third waves occurred in November 2020 and March 2021 respectively and were linked to the emergence of genetic variants of concern[6]. Another surge was observed in the beginning of June 2021.

In the East Africa Community (EAC), vaccination uptake continues to be low compared to other parts of the world. As of 21 November 2021, the EAC states' vaccination coverage ranged from 1-34% with Rwanda having the highest coverage.

Review process

A review team was constituted that had members of the 8th East African Health and Scientific Conference (EAHSC) who had an interest and were currently involved in work that was related to the theme. This team reviewed relevant abstracts presented during the conference touching on the identified theme and developed a summary of the key messages. Additionally, a search was made on PubMed and Google Scholar on relevant published articles related to the theme and synthesis of the same done. This was to identify and document corroborating evidence to work presented in the conference.

Overall synthesis was then done and this is presented in this brief as key messages and recommendations for consideration by the Partner States.



There were various containment measures that were put in place by the various EAC governments to control the pandemic. These included curfews, lockdowns, school closures and cross-border trade and movement restrictions. The containment measures resulted in government revenue losses, job losses, increase in - domestic violence, teen pregnancies, drug and substance abuse, and impact on cultural issues (gathering-burials, weddings) among other socio-economic disruptions.

As the pandemic continues, resulting to an increase in the demand for COVID-19 testing, laboratory professionals have to balance between increasing testing capacity and maintaining high quality laboratory practices [8]. Accurate testing is therefore important to inform critical decision making for clinicians, the public health community and policy makers[9]. It is essential to have effective quality laboratory management systems to achieve the highest level of accuracy and reliability of laboratory test results. The EAC states partnered with Africa CDC to improve laboratory diagnostic systems, which were critical in supporting national and regional COVID-19 surveillance systems[7].

Objective

Rapid review of the experience of the East African Community on COVID-19 response.

Results

We reviewed 16 abstracts presented at the 8th EAHSC from Kenya, Uganda, Tanzania, and Rwanda. They were stratified into four broad sub-themes as detailed in table 2.

1. Social economic impact of COVID-19
2. COVID-19 containment measures
3. Vaccines and immunization
4. Laboratory quality management systems and capacity building

Coverage in most EAC countries is still under 10% as highlighted in table 1 below.

Table 1: Vaccine coverage among EAC partner states

Country	No. infected	No. deaths	No. vaccinated
Kenya	255,088	5,335	6,939,559
Uganda	127,589	3,252	4,751,422
Tanzania	26,270	730	1,337,045
Rwanda	100,349	1,342	8,482,389
Burundi	20,432	14	1,592
South Sudan	12,777	133	212,946

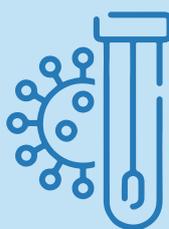
Population target

The 16 abstracts had various population targets including healthcare workers, community members and school going children.

Impact following COVID-19 Response

The 16 abstracts highlighted various response strategies by EAC partner states to the pandemic as described below:

1. Social economic impact of COVID-19.
2. School closure was one key measure implemented by EAC member states to reduce the spread of the virus.
3. COVID-19 containment measures.
4. Community mask wearing, social distancing and banning of social gatherings were the most common interventions implemented for containment of COVID-19.
5. Following the onset of the pandemic, the EAC partner states implemented vaccination as an intervention to control the spread of the SARS-CoV-2 virus.
6. Lab quality management systems and capacity building.
7. Creation of new testing centers and upgrading of existing laboratory infrastructure which resulted in increased testing were the measures implemented by Partner States to improve laboratory quality management systems. The EAC states trained their healthcare workers on implementation of WHO approved COVID-19 guidelines.



Accurate testing is important to inform critical decision-making for clinicians, the public health community and policymakers

Table 2: Findings from the abstracts

Sub-theme	Abstract title	Country	Highlights	Key message
Social economic impact	Gendered effects of COVID-19 related school closures. Faith Mbushi et al. (2021)	Kenya	A needs assessment to understand how the vulnerable groups can be supported to go back to school	Boys are more vulnerable to depression than girls
	Integrating social science approaches in response to COVID-19 pandemic. Tusajigwe Erio et al. (2021)	Tanzania	Rapid Studies for timely contribution of the knowledge to the evidence users	More funding for social sciences research and interventions, mainstreaming social sciences experts in decision-making bodies
	Results from a knowledge, attitudes, practices and perception survey conducted in the early phase of the COVID-19 pandemic, Kenya, 2021. Joyce Wamicwe et al. (2021)	Kenya	Destigmatization of COVID-19 was reported as key precursors to effective home-based quarantine and isolation	Low knowledge, poor perceptions, and practices on COVID-19 among the Kenyan population
	Experiences of frontline workers in quarantine sites for COVID-19 in Kenya: A qualitative study. Kelvin Oruko et al. (2021)	Kenya	Need for comprehensive support from management and government in such trying times when they put their lives on the line for the country	Need for moral and psycho-social support and training
Vaccines and Immunization	Assessment of adverse events following COVID-19 immunization in greater Kampala, Uganda, June 2021. Allan Komakech et al. (2021)	Uganda	Strengthen surveillance for Adverse Events Following Immunizations (AEFIs)	No significant Adverse Events Following Immunizations (AEFIs) were reported. The survey reported (1%) AEFIs among participants
	Evaluation of the effect of community dialogue meetings on self-efficacy, willingness to receive and attitude towards COVID-19 vaccine among district leaders in Rwenzori and Bunyoro regions, Uganda. Edirisa Juniour et al. (2021)	Uganda	Role modelling by community leadership and opinion shapers, as well as the use of community dialogue to communicate recommended COVID-19 interventions to the target populations and communities can be effective strategies	Increase in COVID-19 vaccine reception and commitment to disseminate a positive image of the vaccine to the public found to be significant
	Vaccination status and COVID-19 disease symptom severity at admission: A hospital based retrospective cross-section study in Kampala, Uganda. Shilpi Chakraborty et al. (2021)	Uganda	Individuals should be vaccinated and in case of the COVID-19 disease, the vaccination will support patients to overcome severe COVID-19 cases	There's inconclusive evidence on whether COVID-19 disease is severe among the vaccinated and unvaccinated

Lab quality management systems and capacity building	Quality management systems, a bed rock for resilient laboratory systems in the COVID-19 dispatch: A TASO Soroti regional project experience. Otaala Timothy et al. (2021)	Uganda	Partner States should note that inadequate infrastructure and inadequate human resources in medical laboratories is a significant biosafety risk for COVID-19, and therefore take measures to address the risks	Quality management systems are the bedrock of resilience in COVID-19 sample collection
	Use of a toll-free call center for COVID-19 response and continuity of essential services during the lockdown in Greater Kampala, Uganda. Elizabeth Katana et al. (2021)	Uganda	For future or similar events, the study recommends setting up more such call centres and support centres.	COVID-19 illness inquiries were responded to by the medical team based on reported severity
	Quality verification and traceability for COVID-19 vaccines. Cathryn Meurn et al. (2021)	Rwanda	EAC member states to follow the example of Rwanda and introduce GTR drug coding for harmonization and traceability	Current upsurge in production of counterfeit COVID-19 vaccines and products
	African traditional/herbal medicine in the 21st century: Research in this field at CTMDR-KEMRI, Kenya and a request for collaboration in the East African region. Festus Tolo et al. (2021)	Kenya	MOH and partners requested to support KEMRI to strengthen the capacity of local herbal researchers to generate health products and technologies	Policy and legislation on herbal medicine research and development also needed
	Poor antibiotic dispensing practices for COVID-like symptoms and lack of adherence to preventive measures at community ADDOs and pharmacies in Mwanza, Tanzania. Winifrida Minja	Tanzania	Need for more targeted measures to ADDOS and pharmacy sellers on COVID-19 current standard treatment guideline	Increased antibiotic use to treat COVID-19 like symptoms increasing the development of antimicrobial resistance
COVID-19 containment measures	Community mask wearing, predictors, experiences among rural households of Uganda: A mixed methods approach. Grace Biyinzika	Uganda	One-time provision of masks, provision of ill-fitting and worn-out masks and lack of finances to procure masks hindered adherence to mask wearing	Sensitization on mask wearing and the provision of masks and health educational messages promoting the mask wearing may increase
	COVID-19 cluster investigation in Achwa Hydroelectric Power Plant, Pader District, Uganda. Josephine Namayanja (October 2020).	Uganda	Continued quarantine and surveillance	Risk factors for the propagation of COVID-19 at Achwa Hydroelectric Power Plant
	Epidemiological assessment of COVID-19 cluster among attendees of a church activity in Omoro District, Northern Uganda. Patricia Thiwe (October 2020).	Uganda	Improve adherence to government directives on closure of social gatherings	Assessing exposures to community spread of COVID-19 in Uganda

Conclusion

The evidence shows that the COVID-19 pandemic resulted in school closures which was associated with depression among school going children. Vaccination was associated with better clinical outcomes in infected patients. Community mask wearing and banning of public gatherings are key containment measures. Lab quality management systems are critical tools in enhancing overall laboratory functionality preparedness for epidemic/pandemic response.

Evidence >>>



COVID-19 pandemic resulted in school closures which was associated with depression among school going children.

Recommendations

1. Need to develop comprehensive psycho-social support policies by management and government to support the health of school going children during pandemic responses.
2. Need for continuous surveillance, monitoring, documentation, and community sensitization to increase vaccine coverage and acceptance in the East African Community.
3. Need to establish and strengthen lab quality management systems to enhance preparedness and response in the event of epidemics/pandemics.
4. Need to implement tighter measures for containment of the virus to compliment community mask wearing and banning of public gatherings.

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