



COVID-19 in sub-Saharan Africa: impacts on vulnerable populations and sustaining home-grown solutions

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Abstract

This commentary draws on sub-Saharan African health researchers' accounts of their countries' responses to control the spread of COVID-19, including social and health impacts, home-grown solutions, and gaps in knowledge. Limited human and material resources for infection control and lack of understanding or appreciation by the government of the realities of vulnerable populations have contributed to failed interventions to curb transmission, and further deepened inequalities. Some governments have adapted or limited lockdowns due to the negative impacts on livelihoods and taken specific measures to minimize the impact on the most vulnerable citizens. However, these measures may not reach the majority of the poor. Yet, African countries' responses to COVID-19 have also included a range of innovations, including diversification of local businesses to produce personal protective equipment, disinfectants, test kits, etc., which may expand domestic manufacturing capabilities and deepen self-reliance. African and high-income governments, donors, non-governmental organizations, and businesses should work to strengthen existing health system capacity and back African-led business. Social scientific understandings of public perceptions, their interactions with COVID-19 control measures, and studies on promising clinical interventions are needed. However, a decolonizing response to COVID-19 must include explicit and meaningful commitments to sharing the power—the authority and resources—to study and endorse solutions.

Résumé

Le présent commentaire est fondé sur les témoignages de chercheurs en santé d'Afrique subsaharienne sur les mesures prises par leurs pays pour enrayer la propagation de la COVID-19, dont les effets sociosanitaires, les solutions « maison » et les lacunes à combler. L'insuffisance de ressources humaines et matérielles pour contrôler l'infection et le manque de compréhension ou de reconnaissance par les gouvernements des réalités des populations vulnérables ont contribué à l'échec des interventions pour enrayer la transmission et ont creusé les inégalités. Certains gouvernements ont adapté ou limité les confinements pour en réduire les effets nuisibles sur les moyens de subsistance des gens et pris des mesures particulières pour réduire les répercussions sur leurs citoyens les plus vulnérables. Ces mesures ne profitent pas toujours à la majorité des pauvres, cependant. Néanmoins, la riposte des pays africains à la COVID-19 comporte aussi des innovations, dont la diversification des entreprises locales pour produire de l'équipement de protection individuelle, des désinfectants, des trousseaux d'analyse, etc., qui pourrait renforcer les capacités du secteur manufacturier intérieur et favoriser l'autonomie. Les gouvernements des pays africains et à revenu élevé, les bailleurs de fonds, les organisations non gouvernementales et les entreprises devraient collaborer pour renforcer les capacités des systèmes de santé existants et financer les entreprises africaines. Il faut combler le manque de compréhension par les sciences sociales des

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perceptions du public et de leurs interactions avec les mesures de contrôle de la COVID-19, et le manque d'études sur les interventions cliniques prometteuses. Toutefois, une riposte à la COVID-19 fondée sur la décolonisation doit inclure des engagements explicites et concrets à partager le pouvoir d'étudier et d'approuver des solutions – tant l'autorité que les ressources nécessaires.

Keywords Equity · Infectious disease · COVID-19 · Sub-Saharan Africa · Global health · Decolonization

Mots-clés Équité · maladie infectieuse · COVID-19 · Afrique subsaharienne · santé mondiale · décolonisation

Introduction

The World Health Organization (WHO) recently painted a grim picture for COVID-19 in African countries, warning that the virus could kill over 300,000 and push 30 million into poverty (WHO 2020). Generalizations about what should happen next must be grounded in the realities of local culture, available resources, and socio-political contexts. This mandates a responsibility to listen to local experts.

This commentary is the effort of nearly two dozen health researchers from 12 sub-Saharan African countries, and their Canadian partners. It draws on African co-authors' accounts of their countries' actions to control the spread of COVID-19 and whether the interventions implemented take into account inequities, observed social and health impacts of the pandemic, and what government agencies and development partners could do to improve upon the COVID-19 response. It also recognizes home-grown solutions and gaps in knowledge and reflects on the way forward. Too often, commentaries about public health emergencies in Africa are penned primarily by non-Africans. This norm may unintentionally reproduce colonial and racial inequities. Based on reflections from 23 African scholars, this commentary responds to recent calls to “decolonize COVID-19” and to “decolonize global health” (Palermo 2020; The Lancet 2020; Nyenyezi Bisoka 2020; Bertram et al. 2020). It aims to interrupt that norm, provide a more nuanced view of COVID-19 in Africa, and recognize the value of locally relevant public health interventions and research.

We used a set of five questions to guide researchers' responses. Canadian researchers from the Canadian Coalition for Global Health Research (CCGHR) invited key African colleagues to contribute. Approximately two researchers from each country participated (Burkina Faso, Cameroon, Democratic Republic of the Congo (DRC), Ethiopia, Ghana, Guinea, Kenya, Liberia, Nigeria, Tanzania, Uganda, and Zambia). Effort was made to invite a balance of both senior and junior researchers, and equal participation of men and women. Reflections were analyzed thematically by the first author, with the most common responses for each question summarized. Discrepancies in responses between

individual countries and regions were noted and described. Representative wording from several authors' written responses on key themes were used to draft the initial text. All 23 authors submitted comments on and changes to the initial text and revised draft, shaping the final narrative.

Challenges to infection control

Many residences in Africa are close quarters with shared amenities—some houses have only one toilet or no toilet at all. Many dwellings have no running water, with implications for hand washing and also meaning that trips to shared public water stations are inevitable. True self-isolation of asymptomatic or mild cases and contacts is thus challenging. Designated quarantine, isolation, and treatment centres are often confined to major cities and with limited spaces, if cases surge. National laboratory capacity is also limited. Many treatment centres lack a reliable supply of oxygen, adequate numbers of ventilators, and sufficient numbers of infection control, critical care, and infectious disease specialists. Limited numbers of logistics, specialists, and inadequate capacity for isolation, treatment, and testing were commonly reported health systems challenges. However, in a few cases (Tanzania, Nigeria, Cameroon), lack of mental health support for healthcare workers who have come into contact with suspected or confirmed COVID-19 patients or health staff was thought to be a significant challenge to the COVID-19 response.

A scarcity of personal protective equipment (PPE) was reported in most settings, putting health workers and their families at risk of contracting the disease. In some countries, including Kenya, Ghana, Uganda, and Cameroon, the centralized coordination of the national COVID-19 response was thought to contribute to challenges with procurement and distribution of already available supplies.

Public misunderstandings about COVID-19 transmission are common, including ideas that the outbreak is engineered by the government to obtain donor funds, and that the virus only attacks wealthy and high-income countries (HICs). These misunderstandings can impact adherence to governments' directives aimed at preventing transmission. Such

beliefs are amplified where there is already mistrust and resentment towards governments due to real or perceived lack of accountability and transparency as well as a history of mismanagement of previous health crises such as Ebola (as in the case of DRC, Liberia and Guinea). However, public trust of Rwanda's COVID-19 response is higher; this was attributed to Rwanda's efficient, effective, and transparent governance approach and success in combating Ebola from entering its borders in 2019.

While lack of adherence to government directives like social distancing is a demand side barrier, it can also be seen as a failure of health systems and governments to adequately communicate risks, and support communities to adopt more feasible interventions. There is a saying: "A hungry belly has no ears." How can there be adherence to self-isolation, if such adherence compromises the ability to fulfill household needs? Lack of engagement with community groups, coupled with lack of understanding or appreciation by the government of the realities of vulnerable populations, is a significant contributor to failed interventions to curb transmission.

Exacerbated inequalities

In some contexts, such as Uganda, Cameroon, DRC, and Guinea, public policies to mitigate the epidemic, such as total lockdowns, have been cut and pasted from high-income settings. Lockdowns may exacerbate pre-existing economic, gender, and health inequalities if these are not taken into account during their implementation. Many Africans rely on wages earned daily, and therefore won't eat if they can't get to work. Working or schooling from home via the internet is only feasible for a tiny fraction. For instance, how many families have reliable power supply and computers with access to stable, fast internet required for online education? Lockdowns in the absence of social safety nets leave vulnerable populations such as informal sector workers with an unenviable choice between feeding their families and protecting them from COVID-19.

Some governments have pushed back against recommendations for long-duration or total lockdowns. While the reasons for this push back are multiple, many governments, including Ghana, Burkina Faso, Nigeria, Kenya, Tanzania, Liberia, and Ethiopia, have adapted or limited lockdowns. Most have cited the negative impact of lockdowns on citizens and their livelihoods. In places where lockdowns have been implemented, some governments have tried to minimize the impact on the most vulnerable citizens. Common interventions include cash transfers, online education to mitigate school closures, and food packages for vulnerable groups. However, social inequalities impact these measures, such that even in the few contexts where they are implemented, they may not reach the people in greatest need.

The rise in various forms of violence, with uneven effects mirroring social inequalities, is also a concern. In a few countries, including Nigeria, Guinea, Kenya, Uganda, and Zambia, security personnel enforcing curfew or lockdown measures have been especially violent, with reports of severe punishments, including death, for those who are in violation of these measures. In Uganda, this included injury to a deaf man from a rural area who was unable to access information from government communication campaigns. He was shot several times and consequently, his leg had to be amputated (International Disability Alliance 2020). Deeply concerning too is increased gender-based violence. In Africa as elsewhere, lockdowns increase the risk of domestic abuse, and make it impossible for women and girls to escape it. In Nigeria in particular, there is widespread evidence that lockdowns have sharply increased the incidence of gender-based violence.

Impacts on routine and preventive healthcare

In every setting, routine and preventive healthcare is taking a hit, as limited resources (human and material) are redirected to focus on the COVID-19 public health emergency. COVID-19 has already caused interruptions in immunization schedules. It has also weakened public health responses to ailments such as malaria and meningitis outbreaks, and reduced access to maternal and reproductive health services. As became clear during the 2013–2015 West Africa Ebola epidemic, failure to ensure continuity of health service delivery during a public health emergency results in greater morbidity and mortality than the public health emergency itself.

Home-grown solutions

Yet, it is not surprising that sub-Saharan African countries' responses to COVID-19 have also included a remarkable range of local innovations. In most settings, there has been diversification of local business, with manufacturers shifting production to materials such as masks, PPE, and disinfectants needed locally in the COVID-19 response as well as locally drug production. Increased demand for PPE and scarcity of supply has led to price inflation and flooding of the market with substandard products. To combat this, some countries, including Uganda, Tanzania, Kenya, Nigeria, Liberia, and Ghana, have commissioned and resourced specific manufacturers to produce locally designed PPE that meets infection prevention control standards. In other instances, researchers and local manufacturers have made efforts to assemble medical equipment or laboratory tests that are traditionally imported. Development of a prototype ventilator in Ghana and rapid test kits in Senegal are good examples ("Senegal's

\$1 COVID-19 test kit” 2020; “Minister commends KNUST” 2020). All of these innovations may inspire the expansion of domestic manufacturing capabilities and deepen self-reliance.

Other local responses have featured uncommon government and private sector collaboration. Notable is collaboration between Ministries of Information and telecommunication companies to combat misinformation concerning COVID-19 through avenues such as mobile messaging and social media filtering. In most countries, private sector actors, development partners, NGOs, and faith-based organizations are making donations of PPE, food items, soap and disinfectants, hand-washing kits, and money to vulnerable populations such as the aged, the destitute, single-mother groups, and prisoners, as well as those living in inner city areas.

Ways forward

The future of COVID-19 in sub-Saharan Africa remains uncertain. What is known at this juncture is that unless the current path is interrupted, this pandemic in Africa, as elsewhere, is poised to hook into and deepen inequalities.

These inequalities lie at the level of health but also knowledge production. Many African national and sub-national health jurisdictions are underfunded. But, what happens next with COVID-19 in Africa is not only about the strength or weakness of health systems. Socially determined vulnerabilities to disease in Africa are entrenched with post-colonial patterns of who controls and directs access to the expertise and connected resources for transformation. Few Africa-based African researchers are the principal applicants and real leads on COVID-19 clinical trials and social science research. There is growing talk of “decolonizing COVID-19” and “decolonizing global health” (Palermo 2020; The Lancet 2020; Nyenyezi Bisoka 2020; Bertram et al. 2020). A decolonized response to COVID-19 must include explicit and meaningful commitments to sharing the power—the authority and resources—to study and endorse solutions.

In the immediate future, African and HIC governments, donors, and NGOs can work to improve the availability of PPE, and other logistics such as ventilators, in addition to strengthening laboratories and treatment and isolation centres. Relevant trainings and psychosocial support for healthcare providers and the development and use of risk communication strategies that equitably engage citizens will also be of great help. Any support must be informed by an approach that is transparent, builds trust, and recognizes and strengthens local know-how and existing health system capacity, including routine services.

In the medium term, African and HIC governments, institutions, and businesses can partner and support African-led initiatives that expand domestic or regional capability through provision of technical assistance, technology transfer, and

resources to scale up production for local and international markets. This may lead to sustainable businesses that benefit national development.

If we are serious about decolonizing global health research, we need social scientific understandings, led by the continent’s experts and their trainees, to understand ideas, conditions, and social relations underlying perceptions of and interactions with COVID-19 infectious control measures. Local African investigator-initiated research and research trials on the development of clinical interventions such as vaccines, therapeutics, and/or prophylactic agents, including promising agents from traditional pharmacopeia, also merit support.

Decolonizing global health research implies not only recognizing and funding local expertise and knowledge but also working to shift the institutional arrangements that lead African researchers to experience unearned disadvantage (Nixon 2019; Plamondon and Bisung 2019). These include inadequate core funding to research institutes and universities, and high-income country structures for grant funding and tenure and promotion that undervalue leadership roles for African partners (Palermo 2020). There is no better time than now to rectify these institutional arrangements.

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Compliance with ethical standards

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