The rapid spread of the COVID-19 pandemic and the devastation it has caused in countries around the world have been unprecedented in modern history. Owing to the perfect storm of dense population, suboptimal hygiene, and limited health care infrastructure in many African cities, the initial fear was that sub-Saharan Africa would face devastation. After all, SARS-CoV-2, the causative pathogen of COVID-19, is primarily spread via respiratory droplets and close contact with infected persons. While the pandemic persists with reemerging waves of new infections and emerging variants across the globe, limited data from sub-Saharan Africa, with the exception of South Africa, suggest that the impact of SARS-CoV-2 infection may be milder than expected in the continent.\(^1\)

The study by Iroungou et al\(^2\) allows new insight into the nature of the effects of the early months of the pandemic in the Central African country of Gabon. It describes the demographic and clinical characteristics of individuals hospitalized with SARS-CoV-2 infection from March to June 2020 at a single center in Libreville, Gabon. This article provides detailed information for a region of the world about which limited literature exists, including presenting symptoms, basic vital signs, preexisting comorbidities, and associated radiologic findings. Consistent with observations from other regions of the world, the study noted that COVID-19 disease severity and fatality were associated with older age, preexisting health conditions (e.g., arterial hypertension and diabetes) and male sex. On the contrary, the burden of infection was low; most cases were asymptomatic, and symptoms were mild when present. Of note, only 31 of the 837 cases (3.7\%) presented with severe infections. Furthermore, the fatality rate of 1.4\% and the median age of 52.5 years among the deceased are much lower than those observed for hospitalized patients in other parts of the world, which reflects the relatively young age of urban populations in most African countries. These data corroborate reports,\(^3\) mostly anecdotal, that Africa may have been spared with regard to this pandemic.

Multiple reasons have been offered for the seemingly low burden and severity of COVID-19 in the African continent. Like others, Iroungou et al\(^2\) speculate that this may be due to the smaller pool of older and more vulnerable individuals in the population and cross-protection from prior exposure to other coronaviruses. In 2020, the median age in Africa was 19.7 years, and this is often lower in the large cities, where younger, working-age individuals are concentrated, relative to the rural communities with a retired, older population. Relative to Western countries, major risk factors for COVID-19 severity and fatality, such as obesity and diabetes, are less common in Africa. Furthermore, sub-Saharan Africa is a hotspot for sickle cell disease, malaria, and tuberculosis with high rate of BCG vaccination, and some have wondered whether these and other conditions yet unidentified are protective against SARS-CoV-2 infection and its impact.\(^4\)

While there is paucity of evidence to support these speculations, there is little doubt that many countries in Africa have so far experienced lesser COVID-19 burden and disease severity relative to other regions of the world, including other low- and middle-income countries in Latin America, the Middle East, and Asia with comparable urban population structure and health care infrastructure.\(^5\) This observation is certainly intriguing, and as alluded to by Iroungou et al.,\(^2\) raises a number of important and unanswered questions that deserve a closer look. Could yet-to-be-identified ethnodemographic factors be driving this relative protection? Are prior BCG vaccination and health conditions endemic to Africa, such as sickle cell disease, exposure to other coronaviruses, and malaria infection, protective? Some of these questions are beginning to be addressed in well-designed clinical and translational studies. Answers to these questions will no doubt shed additional light on...
our understanding of this novel and deadly virus, and may offer insights that could lead to more rapid containment and ending of the ongoing pandemic, and potentially, the prevention of future coronavirus or other related outbreaks.

We should, however, sound a note of caution in the interpretation of the findings of Iroungou and colleagues.2 First, access to COVID-19 testing in many parts of Africa has been limited, and the prevalence of infection and burden of disease in this region may be grossly underreported, as emerging seroprevalence studies suggest.6 Second, the study of Iroungou et al2 captured data from a single tertiary health care center and therefore is not reflective of the community penetrance of the pandemic. Last, the authors report only on the initial months of the pandemic, and no region of the world is free of COVID-19 yet. The recent lesson from India should be fresh in the minds of most people.5 Like many African countries, cities in India are large and densely populated—a rapid spread of the pandemic was therefore anticipated from the onset. However, India was initially spared the severe attack experienced in places like the United States, the United Kingdom, and Italy. In the spring of 2021, India relaxed its public health measures, allowing large religious, political, and sport gatherings. The aftermath was waves of infections that spread across India, overwhelming the health system, leaving nearly half a million dead from COVID-19. The delta variant that was identified during these waves now drives the reemergence and spread of the pandemic across many parts of the world.

The silver lining in this report and the African COVID-19 experience is that the window of opportunity still exists to protect one of the most vulnerable regions of the world from the catastrophes of this pandemic through massive and rapid vaccination. The Indian experience taught us that new waves of SARS-CoV-2 infection in one part of the world have ripple effects that extend to other regions. Even if yet-unidentified factors have protected many countries in Africa from facing the worse of the pandemic from the original strain, there is no guarantee that these countries will have the same fate with emerging variants with more efficient infectivity profile. Until the pandemic is quelled in every part of the world, no country can be at ease. Unvaccinated populations will continue to be a breeding ground for variants. COVID vaccines should be made available by the global community to countries in Africa and other parts of the world that cannot afford them. Vaccine access and implementation across the African continent is an urgent public health priority, without which the goal of ending the pandemic will remain elusive. It has been done before with other outbreaks, including smallpox.7 It can be done again.

ARTICLE INFORMATION

Open Access: This is an open access article distributed under the terms of the CC-BY License. © 2021 Ofotokun I et al. JAMA Network Open.

Corresponding Author: Igho Ofotokun, MD, MSc, Division of Infectious Diseases, Department of Medicine, Emory University School of Medicine, 49 Jesse Hill Jr Dr, Atlanta, GA 30303 (iofotok@emory.edu).

Author Affiliations: Division of Infectious Diseases, Department of Medicine, Emory University School of Medicine, Atlanta, Georgia (Ofotokun); Emory University School of Medicine, Atlanta, Georgia (Sheth).

Conflict of Interest Disclosures: None reported.

REFERENCES

