

COVID-19 and the state of African neurology

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Expectations of Africa having high rates of infection and death from COVID-19 have, as yet, not materialized. At the time of writing (May 25, 2020), all 54 countries have officially reported COVID-19 cases; 123 724 people have tested positive for the disease and 3668 people have died. The reasons for such low levels may be due, in part, to the rapid responses of countries. South Africa declared a national state of disaster and implemented a nationwide lockdown before even its first death was reported and, likewise, Uganda suspended all public

gatherings before the country reported its first case. In Ethiopia, where the first case was reported on 13 March, the office of the Prime Minister announced on 16 March that schools, sporting events and public gatherings should be suspended for 15 days. In Addis Ababa, the Council of Ministers declared on 8 April a 5-month state of emergency.

In addition to the rapid and seemingly insightful implementation of strict containment measures, the continent's population demographics may have conferred some advantage: 3% of sub-Saharan Africa's population is over 65 years of age and nearly half (43%) of the population is under 15 years of age. COVID-19 has, thus far, claimed most lives in patients over 70 years of age.

However, complacency over the effectiveness of lockdown measures across the continent might be premature. Worryingly, two-thirds of the current total number of cases in Ethiopia were reported in the last 2 weeks, since the first case on 13 March, suggesting perhaps that the country is now facing a growing health disaster. Furthermore, poor reporting, limited communication systems for both patients and health professionals, and lack of surveillance and testing facilities across the continent may also be contributing to the low numbers recorded. Notably, registration rates of all deaths and causes remain incomplete in many African countries: precise estimates are difficult to obtain but coverage estimates of recorded deaths range between 5% in Mozambique, 16% in Zambia, 25% in Botswana and Ghana, and 67% in South Africa [1]. Additionally, COVID-19 cases may be confused with other infectious diseases, such as malaria, typhoid, human immunodeficiency virus and tuberculosis, resulting in further reporting delays and deficits.

Cultural issues, where patients with COVID-19 might be ostracized by communities and instead of seeking medical assistance will consult traditional or voodoo practitioners, will further lead to under-reporting.

Countries' experience of pandemics and epidemics varies across Africa; such differences are likely to result in

differences in preparedness, such as availability of testing and personal protective equipment. West African countries may be able to raise a better response given their recent experiences with Ebola. East African countries have likewise gained crucial epidemic experience as cholera has affected the region repeatedly in past years.

Clinically, a considerable number of patients with COVID-19 have neurological symptoms as part of a clear, and now increasingly recognizable, presentation of their illness; these include headaches, myalgia and an altered level of consciousness. Some patients with SARS-CoV-2 may present with symptoms indicating an acute stroke, epilepsy, encephalopathy and demyelinating neuropathies, without the cough, fever or other respiratory problems that might give a clue to the underlying pathology. Diagnosing and then giving appropriate treatments to such patients is challenging and requires specialist neurological input, which is grossly lacking.

Such well-recognized deficiencies (few neurologists, limited imaging modalities and non-existent specialist diagnostic tests, e.g. electrophysiology and antibody screening) are, in the context of COVID-19, now being thrown into even sharper relief. A World Health Organization report, published in 2004, found the ratio of neurologists to population to be 0.03 per 100 000 in Africa compared with 4.84 per 100 000 in Europe [2].

Finally, the usual neurological clinical practices, as with other specialist services, have been disrupted as a result of the COVID-19 pandemic.

It would be a tragedy if COVID-19 was necessary to appreciate the dire shortage of neurological services in African countries but often only such emergencies can provoke change.

Ideally change should come now and not before the full force of the pandemic unfolds.

Disclosure of conflicts of interest

The authors declare no financial or other conflicts of interest.

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