

Coronavirus Disease (COVID-19) the African Story: A Review

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ABSTRACT

Corona virus disease (COVID-19) is a global health threat that put panic in the minds of people worldwide. Although, the disease originate from China, but its effect covers the whole world. This review is to assess the effect of COVID-19 in the African continent. Data from already published researches were obtained, through which it was found that, Africa had its first confirmed index case of COVID-19 on the 14th of February, 2020, from Egypt, second case on 25th February, 2020, from Algeria while the 3rd was in Nigeria on the 27th of the same month. From there, the cases continue to spread throughout the continent. The review also highlighted on some factors that were thought can put Africa at higher risk of COVID-19; these include Africa China relation, which accounts for an average of 8 flights per day between the two regions, according to an investigation in 2018; endemic diseases that are common in the region and inefficient health system, among others. It was also observed according to the review that, world health organization (WHO) tried to upgrade the laboratory capacity for COVID-19 test in the continent at the time the disease hit the region. For that reason, between February 2nd and 10th March 2020, the laboratory capacity for COVID-19 test were raised, from 2 to 40 across the continent, WHO also provided 42,000 PCR test kits and 195,000 sample collection kits at around the same time. According to the review, as reported in WHO corona virus disease situation report of 9th July, 2020, at a point, in the progress of the disease in Africa, there were 493,131 cases with 11,643 deaths, indicating 25% cases increase and 18% deaths increase over a week. Based on the review, it can be concluded that, African countries are also victims of COVID-19, as a lot of them are still battling with the disease to date.

Keywords

Corona virus, COVID-19, African continent, Index cases.

Introduction

Corona virus disease (COVID-19) came as a shock to the global health system, cutting across all nations, rich or poor and big or small. Its ravaging tendency caused World Health Organization (WHO) to declare the novel human corona virus disease nCov (COVID-19) as an epidemic and later scale it up to pandemic status. The disease originate from Wuhan, on December the 8th 2019, subsequently, WHO announced it as a Public Health Emergency of International Concern (PHEIC) on the 30th January, 2020 [1].

In the wake of the disease, African countries also reported several confirmed cases with gradual upsurge in incidence. For that,

WHO and partners started and continued to monitor and provide technical and operational support to member states, to scale up the response in the affected countries and enhance readiness throughout the region. At a point, from March 11, 2020, according to WHO Africa External Situation Report, up to 18 new countries recorded new confirmed cases, apart from those already known to have; these were Ghana, Ethiopia, Kenya, Namibia, Eswatini, Benin, Mauritania, Rwanda, Central African Republic, Equatorial Guinea, Gabon, Gambia, Guinea, Liberia, Republic of Congo, Tanzania, and Zambia [2].

In the African region, spread of the disease became more evident, as at March 18th 2020, in which confirmed cases reaches up to 345 with seven (7) deaths, as reported from 27 countries in the region. The case distribution occurs in the following order: Gambia (1),

Central African Republic (1), Benin (1), Togo (1), Eswatini (1), Guinea (1), Mauritania (1), Togo (1), Zambia (2), Namibia (2), Liberia (2), Equatorial Guinea (3), Tanzania (3), Congo (Republic of) (3), Gabon (3), Seychelles (6), Ethiopia (6), Cote d'Ivoire (6), Kenya (7), Ghana (7), Nigeria (8), Cameroon (10), Rwanda (11), Democratic Republic of the Congo (14), Burkina Faso (26), Senegal (31), Algeria (72), and South Africa with highest cases (116). The seven deaths were reported from Burkina Faso (1), and Algeria (6) and all the infected individuals were either 50 years of age or greater.

Later, two hundred and seventy seven (277) additional confirmed cases were reported from six more countries: Egypt, Morocco, Tunisia, Sudan, Djibouti and Somalia with 196 cases 4 deaths, 49 cases 2 deaths, 29 cases 0 deaths, 1 case 1 death, 1 case 0 deaths, and 1 case 0 deaths respectively. By June, the 7th 2020, WHO reported over seven million cases of the disease globally, of that, out of Africa's share, South Africa had the biggest burden (over 54,000 cases) and Egypt had (over 38,000 cases) as the second most affected country [3].

The African index cases of corona virus disease (COVID-19)

Based on records on corona virus disease (COVID-19), as of 25th March 2020, Africa had relatively low number of cases across the continent, in which 46 out of 47 countries reported a total of about 2,475 confirmed COVID-19 cases with 64 deaths [1,2]. Africa got its first confirmed (index case) of COVID-19 through Egypt on 14th of February 2020, while the second case was confirmed in Algeria on 25th of February, 2020 and the third case was registered in Nigeria on the 27th of the same month, while the next index case in Africa was from Senegal on 1st of March, 2020 [4].

Various other African countries followed, with their respective first confirmed cases; among them were Tunisia and Morocco on March the 2nd, 2020 and South Africa on 5th of March, 2020. But some countries reported two cases at once, these include; Cameroon and Togo on the 6th of March 2020; and Burkina Faso 9th March, 2020. Other first (index cases) were reported by the Democratic Republic of Congo, on the 10th March, 2020, the Ivory Coast on 11th March, 2020, and Ghana on the 12th of March, 2020. The 13th of March, 2020, witness large number of African countries that reported their confirmed index cases; these were Sudan, Mauritania, Rwanda, Ethiopia, Guinea, Namibia, Kenya, and Gabon. By the 14th March, 2020, many other African countries reported yet other index cases, these include: Chad, Gambia, Somalia and Liberia [1,2,5].

Some of what was believed to have helped Africa in the initial fight, were, the containment strategy and the screening on arrival of passengers at the various air ports on the continent, isolation for treatment and contact tracing. But despite these efforts, the question that; is it really true that SARS-CoV-2 or corona virus disease agent, do not thrive very well in hot weather (climatic condition) or is due to high population of youths that are less susceptible on the continent or is it an issue of genetic differences, that the virus causes less havoc in Africa compared to other regions in the world? This is still not adequately answered [6].

After the first confirmed case on the 27th February 2020 in Nigeria, scientist/researchers from the Nigeria Institute of Medical Research Lagos, African Centre for Genomics of Infectious Diseases of the Redeemers University and Centre for Human and Zoonotic Virology in Lagos University Teaching Hospital, were successful in sequencing the genome of the COVID-19 agent. Second confirmed case in the country was recorded on the 9th of March, 2020, according to Nigeria Centre for Disease Control (NCDC). The case was found to be a contact of the initial index case of February 27th 2020. Shortly after, 51 people were confirmed positive of the disease from 9 different states and the Federal Capital Territory (FCT): These were; Rivers, Ogun, Bauchi, Oyo, Lagos, Edo, Ekiti, and Osun states, plus the (FCT). Among them, Lagos state had over 30 of the total confirmed cases as at the time. Around the same period one death was recorded while two of the cases including the index case and the first contact were successfully discharged on the 13th March, 2020, following two consecutive negative test results [7].

Normally, COVID-19 patient is expected to have cleared the virus and can be discharged after two to four negative qRT-PCR tests on nasopharyngeal and/or throat swabs sampled at 24 or more hours interval [8].

Strengthening Africa's Laboratories capacity and logistic system

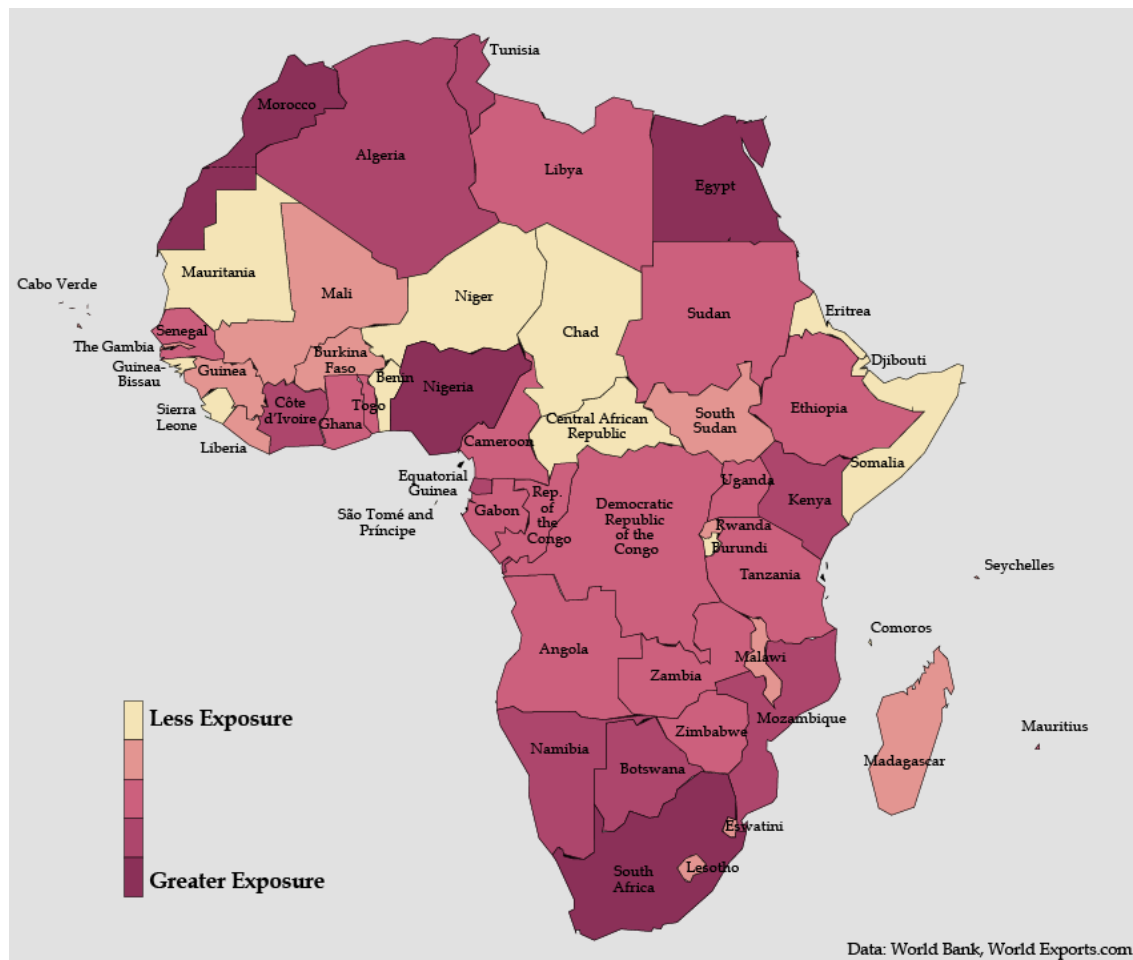
In the wake of COVID-19, WHO, swiftly moved in, to strengthen and scaled up the Africa member states diagnostic capacity, consequently, between February 2nd and March 10th 2020, the laboratory capacity for SARS-CoV-2 (corona virus disease agent) test, was increased from two (2) to forty (40) countries in the continent. This was made quickly possible because of the existing capacity built through the Influenza laboratory network across the region. Liberia, Zimbabwe, Chad and Mauritania were among the countries that enjoyed upgrade of their laboratory capacity by WHO experts around that time. WHO also immediately made available, PPE starter kits to 24 countries in the first stage, while shipment of more items for the second time, was made to countries with confirmed cases and to Major Points of Entry to Africa (MPEA), including Kenya, Togo, Ethiopia, and Benin among others. WHO also accorded operational supports and deployed logistics experts to South Africa, Nigeria and Senegal to further strengthen rapid responses to COVID-19 in those countries, this was highlighted at COVID-19 WHO Africa Region External situation report 3 on 18th March 2020 [4].

Presumed factors that could make Africa most vulnerable to COVID-19

Africa-China relation

Mutual relation between China and Africa is great that, almost 2 million Chinese lives and work in Africa, for that reason, more Africans also increasingly take tour to China for study or business. Example, investigation showed that, in 2018, China was home to up to 81,562 African students, which is equivalent to 16.57% of the total number of foreign students in China, second only to those

Map showing Africa's relative exposure rate in relation to COVID-19



Source: Africa Center for Strategic Studies, 2020

of Asia. It was estimated that, airline operation between Africa and China is about 850,000 passengers annually, meaning about an average of eight (8) direct flights a day between the two regions [2].

Endemic and other infectious diseases in African continent

Other factors that were thought might put Africa at greater danger to COVID-19, were endemic diseases such as malaria and tuberculosis and/or the pre-existing infectious diseases such as Ebola and/or Lassa fever as the case may be, as well as increased prevalence of non-communicable diseases like heart disease, hypertension and diabetes, which are also believed to increase the danger for chances of COVID-19 [1].

Inefficient instituted health system

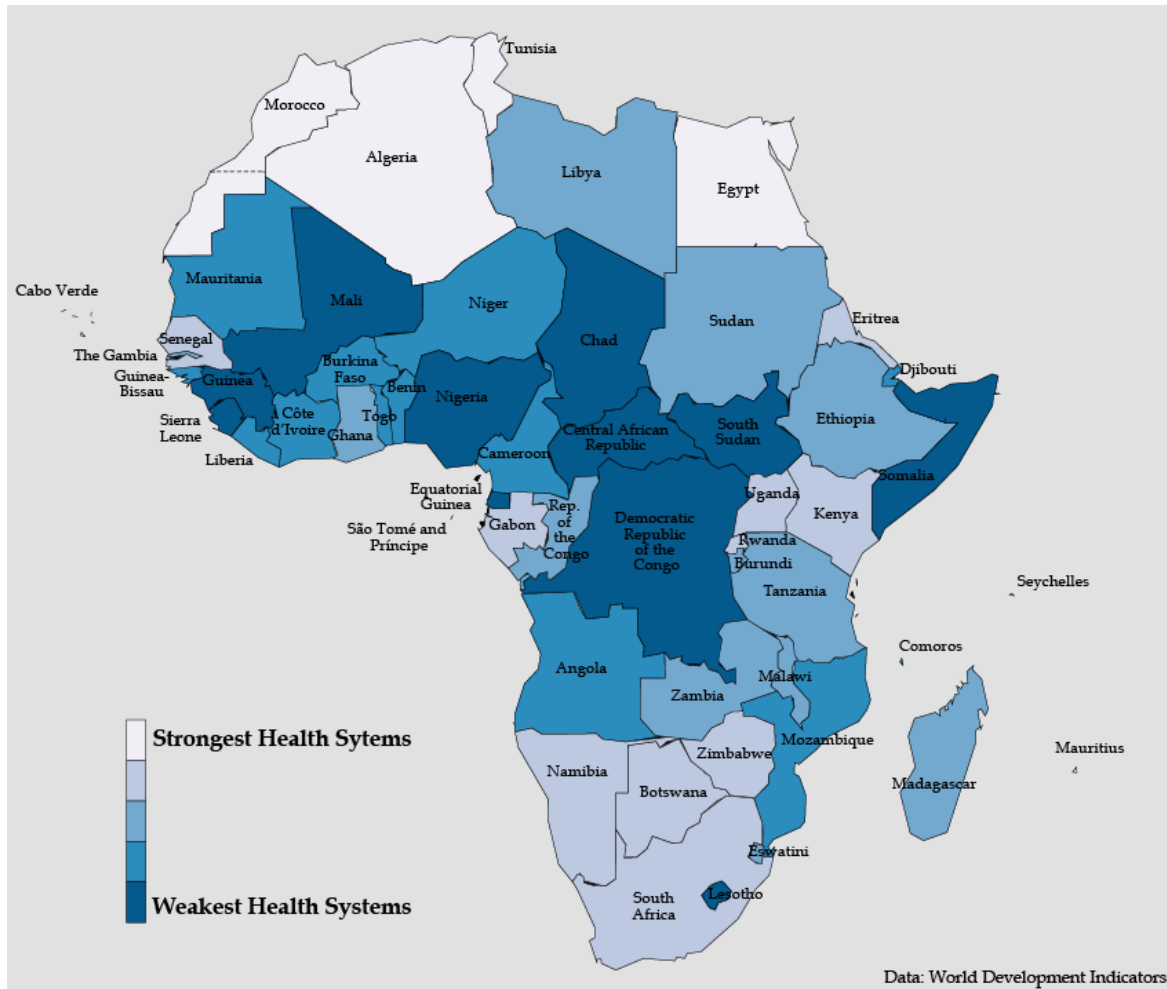
Aware of their relatively weak health care system, when the disease started to grow out of hand, many African countries begin to implement strategic plans to curve the emerging and rapidly growing pandemic. For that reason, some countries like Rwanda and Kenya suspended all international events and gatherings until further notice, to minimize the chances of rapid spread of the COVID-19. In the same vein, Nigeria on the 31st January, 2020, constituted what was called Corona virus Preparedness Group, because, WHO had already categorized Nigeria among the 13

high-risk African nations, with regards to COVID-19 spread in the region [3]. Currently, there exist in Africa, communities that has no healthcare facilities while some that have the facilities faces inadequacy in basic operational requirements and staff to handle the facilities [9].

Efforts to combat COVID-19 in Africa

According to Africa center for disease control CDC dash board on COVID-19, to further assist in the capacity building, WHO sent over 420,000 PCR tests kits to: Ethiopia, Zambia, Democratic Republic of the Congo, Uganda, Comoros, Mali, Zimbabwe, Burkina Faso, Nigeria, Kenya, Cameroon, Senegal, Benin Angola, South Africa, Lesotho, Central African Republic and Gabon. At the same time, over 195,000 sample collection kits were also sent to 25 countries. Additionally, 2,522 oxygen concentrators were also delivered to 26 countries as initial take off. To further reduce risk of spread of the disease, some African countries like Burundi and Uganda made systematic quarantines compulsory on travelers that come from high-risk countries, also at the same time, many African airline operators, like Rwanda Air and Kenya Airways, immediately suspended flights to high-risk countries such as China and Italy [2].

Map showing relative strength of health system in Africa



Source: Africa Center for Strategic Studies, 2020

Some updates on COVID-19 from the continent

Based on WHO corona virus disease (COVID-19) situation reports of 9th July, 2020, it was reported that, as of July 7th, 2020, there exist 493,131 cases of COVID-19, with 11,643 deaths in the African continent, which is 25% increase in cases and 18% increase in deaths rate against the preceding week [4].

Another update on August 19th titled: COVID-19 Situation update for the WHO African Region External Situation Report 25, showed that, as of 18th of August, 2020, up to 962,290 COVID-19 cases were recorded in Africa, which comprised of 962,289 confirmed cases and one probable case reported in the Democratic Republic of Congo. In all the cases so far, South Africa has registered more than half of the cases in the continent 592,144 representing (62%) of the cases.

The following are nine more countries with relatively heavy burden: Nigeria, Ghana, Algeria, Ethiopia, Kenya, Cameroon, Côte d'Ivoire, Madagascar and Senegal with (49,895), (42,993), (39 025), (32 722), (30 636), (18 624), (17,150), (14,009) and (12 305) number of cases respectively. Together with South Africa,

these nine countries collectively accounted for 88% (849,503) of the total recorded cases. Of the total (962,290), up to 750,071 representing (78%) are believed to have fully recovered, from 47 countries of the region [4].

Caution on border re-opening and flight resumption by WHO

According to WHO suggestion, as countries now begins to re-open borders and air travels including both private and commercial flights resume, African countries must take effective precautionary measures, such as, entry and exit screenings, physical distancing, the practice of regular hand hygiene and effective implementation of cough etiquette, to mitigate the risk associated with the COVID-19, especially in the airports operations amidst the pandemic [4].

Conclusion

Corona virus disease SARS-CoV-2 (COVID-19), as a pandemic, affects all nations across the globe and African countries not an exception, as they are equally hit by the diseases although not as hard as expected.

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