

## A review of COVID-19 in Nigeria: impact on individuals, organizations, communities, society and public policy

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### Abstract

**Background:** Coronavirus disease 2019 (COVID-19) is an infectious disease caused by a newly discovered strain of Coronavirus. COVID-19 has caused untold fatality and hardship to human lives globally and Nigeria has not been left out. The aim of this review was to identify and appraise literature on the impact of COVID-19 on individuals, organisations, communities and public policy in Nigeria.

**Methods:** A comprehensive search was conducted in bibliographic databases such as PubMed, Google scholar and other websites reporting on COVID-19. Studies on prevalence, diagnosis, treatment, prevention and impact of COVID-19 in various countries, and particularly in Nigeria, were included. The result of this review is presented in a narrative form.

**Results:** As of 18 August, 2021, there were 183 444 confirmed cases of COVID-19 in Nigeria. Death rate is less than 5%, however, several Nigerians have lost their sources of livelihood. Organisations are experiencing low productivity and communities are going through difficult situations economically. The government has made efforts to support the masses through palliative donations. Specific findings from this review are anecdotal, as there were only a few published studies from Nigeria as at the time of this review.

**Conclusion:** The impact of COVID-19 has been largely detrimental to individuals, organisations and communities in Nigeria. Based on findings from this review, we recommend that contextualised measures be put in place to mitigate the negative impact of COVID-19 at all levels in Nigeria.

**Keywords:** *Coronavirus, COVID-19, health, health policy, Nigeria*

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### Introduction

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered strain of

coronavirus [1]. Coronaviruses (CoV) are a large family of different viruses, including the Middle East Respiratory Syndrome (MERS), the Severe Acute Respiratory Syndrome (SARS) and common cold [2]. Coronaviruses infect many species of animals including humans, with a potential to cause both acute and chronic diseases [2]. COVID-19 is a new strain of virus from the coronavirus family which had been previously identified only in animals [1].

On 31st December 2019, a certain number of patients with pneumonia of unknown etiology were identified in the city of Wuhan, China [3]. Following investigations, the World Health Organisation (WHO) confirmed that the outbreak was coronavirus epidemic, which was associated with animal-to-human transmission at the Huanan South China Seafood Marketplace in Wuhan, China [1,4]. As the number of confirmed cases surged in China, the disease outbreak was declared a Public Health Emergency of International Concern by the WHO on the 30<sup>th</sup> of January 2020 [1]. Extensive laboratory investigations revealed that the disease was caused by a new strain of coronavirus, which had not been previously reported in humans [5] and was named coronavirus disease-19 (COVID-19) on 11th of February 2020 by WHO [6]. However, it was observed that there was an upsurge in the number of infected people, majority of whom had no history of exposure to wildlife or visit to Wuhan marketplace. Hence, a secondary source of the infection; human-to-human transmission via close contact with respiratory droplets of infected persons was identified [4,6,7]. According to the National Health Commission of People's Republic of China [8], there were 11 791 confirmed cases and 17 988 suspected cases recorded in 34 provinces in China by 31st January 2020. On March 11, 2020, COVID-19 was declared a global pandemic by WHO [1]. Since then, the number of confirmed cases has continued to rise exponentially, with a doubling time of 1.8 days [9]. An increase in the number of cases has put a strain on individuals, health care systems, economies and countries across the world.

### Diagnosis

First, individuals have to meet the diagnostic criteria for COVID-19 testing. WHO has provided diagnostic criteria which focuses on travel history, contact with a confirmed case and presence of symptoms such as cough and fever. Collection of specimens from the upper respiratory tract and possibly, the lower respiratory tract is done after meeting the diagnostic criteria. The tests are performed in Nigeria by laboratories that are designated by the Nigeria Centre for Disease Control (NCDC) [10].

### Prognosis

The chance of recovery from COVID-19 is high, as reported death rate ranges between 1%-2% depending on the country. The majority of the deaths have occurred in patients aged over 50 and those with underlying medical conditions such as hypertension, diabetes and cancer [11].

### Mode of Transmission

It was previously reported that human to human transmission of coronaviruses occurred mainly through nosocomial transmission, direct contact with intermediary host animals or consumption of milk, urine, or uncooked meat from infected animals [12]. However, recent studies have shown that COVID-19 is transmitted from person-to-person primarily through saliva droplets, respiratory droplets from the nose or mouth when an infected person coughs or sneezes and through body contact [13]. The incubation period of COVID-19 is between five to six days from the day of infection, the longest being fourteen days, after which symptoms begin to appear [14]. The new delta variant is considered "a variant of concern" because has higher transmissibility and higher infection rate than other variants of COVID-19 [15].

### Symptoms

Symptoms of COVID-19 range from cough, shortness of breath, fever, respiratory distress to severe pneumonia and multi-organ failure [6]. According to the Chinese Centre for Disease Control and Prevention [16], the symptoms of COVID-19 can be classified into three levels based on the severity of symptoms: mild, severe and critical. Patients in the mild level of symptom severity present with either no-pneumonia or mild pneumonia. Patients in the severe level have dyspnoea, respiratory frequency  $e > 30/\text{min}$ , blood oxygen saturation  $d < 93\%$ ,  $\text{PaO}_2/\text{FiO}_2 < 300 \text{ mmHg}$ , and/or lung infiltrates  $> 50\%$  within 24 to 48 hours. Patients in the critical stage present with respiratory failure, septic shock, and/or multiple organ dysfunction or failure [17].

Most people infected with COVID-19 will experience mild to moderate respiratory illness and recover without requiring special treatment. However, those who present with mild/moderate symptoms can progress to severe and critical levels, if immediate care is not provided [14]. Furthermore, older people, and people with underlying health problems such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop critical illness [1]. The asymptomatic COVID-19 carriers with mild symptoms or no symptom

at all can pose a threat, which could be a huge challenge in containing the spread of this pandemic [17]. Therefore, early detection, contact tracing and treatment system needs to be put in place to forestall the spread of the disease [17].

### Control and Prevention

The best way to prevent and slow down transmission of COVID-19 is to first be well informed of the virus, its mode of transmission, its symptoms, its causes and how it spreads and second, to take necessary precautions. The World Health Organization recommends these basic preventive measures, as they are most crucial in controlling the spread of COVID-19 [1]: regular handwashing with soap and water, or cleaning of hands with alcohol-based hand sanitizers, maintaining at least one-metre distance from anyone who is coughing or sneezing, avoiding touching of the face, covering the mouth and nose with a flexed elbow or disposable tissue when coughing or sneezing, staying at home when ill, refraining from smoking and other activities that weaken the lungs, practicing physical distancing by avoiding unnecessary travel and staying away from large groups of people are strongly advocated as preventive measures. Isolation of confirmed or suspected cases with mild illness at home is recommended. The ventilation at home should be good with sunlight to allow for destruction of virus. Patients already infected with the virus are to wear a simple surgical mask and practice cough hygiene. Caregivers are also advised to wear a surgical mask when in the same room as a COVID-19 patient and to practice hand hygiene every 15–20 minutes [18]. Following several clinical trials, certain COVID-19 vaccines such as AstraZeneca/Oxford vaccine, Johnson and Johnson, Moderna, Pfizer/BionTech, Sinopharm and Sinovac have met the necessary criteria for safety and efficacy and are now being utilized as preventive measure [19].

### Treatment

The treatment for COVID-19 is symptomatic. Isolation and supportive care such as oxygen therapy, fluid therapy and antibiotics treatment for secondary bacterial treatment or bacterial co-infection is advised [20]. Oxygen therapy is indicated for patients with severe infection and mechanical ventilation may be needed in cases of respiratory failure [11]. The treatment of COVID-19 is preceded by diagnosis, which is accomplished through history taking, observation and examination of clinical manifestations, radiographic imaging characteristics

and laboratory investigation [21]. COVID-19 affects different people in different ways and there is no established cure for it yet, therefore, treatment is basically supportive [18]. The use of nutritional supplements, symptomatic treatment and antiviral medications are advocated in the treatment of all patients with COVID-19 [22], though the role of antiviral agents is yet to be established [18]. Antiviral agents employed in the treatment of patients with COVID-19 include lopinavir/ritonavir, ribavirin, interferon  $\alpha$ , chloroquine phosphate, and Abidor, alongside oxygen therapy, glucocorticoid therapy and convalescent plasma for the critically ill [22]. There is currently no evidence that antibiotics use can help in the prevention and cure of COVID-19. COVID-19 is caused by a virus as opposed to myths being disseminated recently that the novel coronavirus is caused by a bacterium.

### Prevalence of COVID-19

Globally, the number of confirmed COVID-19 cases had risen to 207 784 507 with 4 370 424 deaths as at 06:28pm CEST on 17 August, 2021. North and South America are the leading WHO regions with the highest number of cases while Western pacific is the region with the least number of cases (Figure1). Studies have shown that Asian populations appear to be more susceptible to the disease than others, although more evidence is needed to ascertain this proposition [24]. Chen *et al* [25] also reported a higher prevalence of the disease among men than women. Older men with comorbidities have been found to be at higher risk of severe and fatal outcomes from the infection [25]. On May 2, *The Guardian* reported that numbers of cases and deaths could be understated in Africa because only four countries (South Africa, Morocco, Egypt, and Algeria) account for half of the cases, and these countries have relatively well-developed health systems and testing capacities; thus, underreports could result simply because the virus is not being detected [26].

### COVID-19 in Nigeria

According to the Nigeria Centre for Disease Control (NCDC), Nigeria reported its first confirmed case of COVID-19 on the 28<sup>th</sup> of February, 2020, which was also the first case announced in the sub-Saharan Africa sub-region [27]. Similar to the Ebola epidemic of 2014, SARS-CoV-2 originated from Lagos airport [28]. The number of confirmed COVID-9 cases and resultant deaths has continued to rise in Nigeria. As of 18 August, 2021, there were 183 444 confirmed

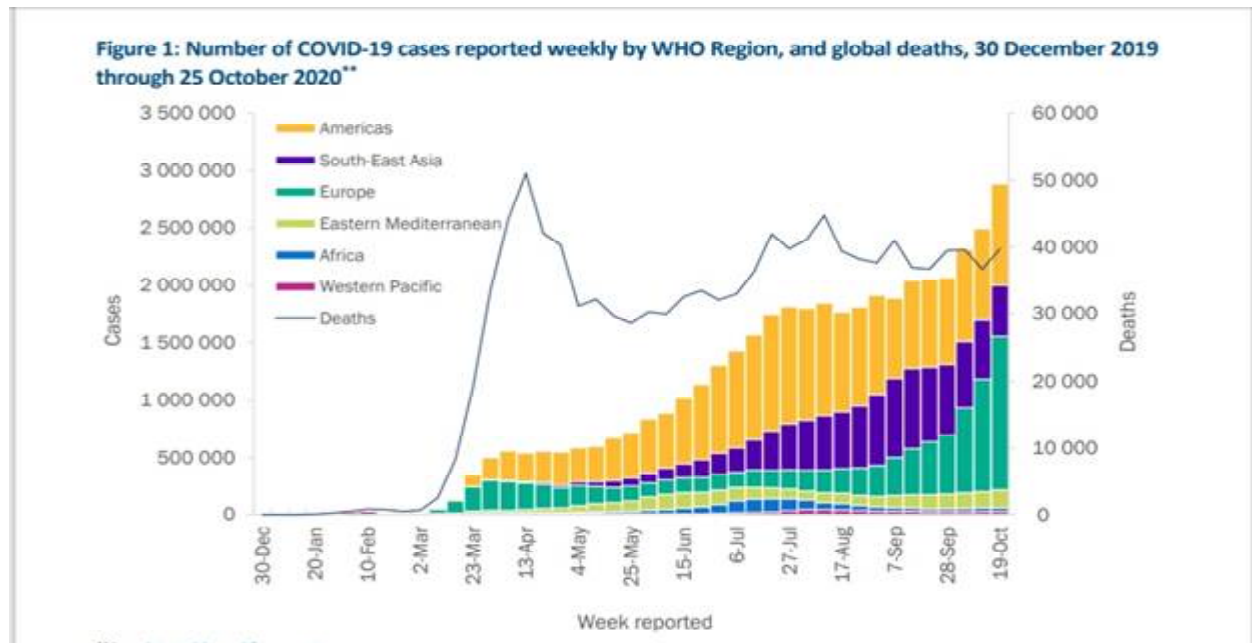


Fig. 1: Number COVID-19 cases reported weekly by WHO region, and total deaths, 30 December to 25 October 2020 [1].

cases, with 13 756 deaths [29] in Nigeria. Once a case of COVID-19 was confirmed in Nigeria, the National Coronavirus Emergency Operation Centre began acting [30].

Thirty-five states and the Federal Capital Territory have since reported confirmed cases of COVID-19, with Lagos having the highest number of cases [31]. The figure cited indicates a low level of spread of COVID-19 in Nigeria. But this is at least partly driven by low levels of testing. Nigeria, with about 200 million people, had conducted just 2 648 684 COVID-19 tests as of 18 August, 2021 [27]. Nigeria's COVID-19 spread had initially been concentrated in Abuja, Lagos, and Ogun state. Those three states were placed on lockdown on March 30, with an announcement by President Buhari to begin easing some restrictions on May 4.

### Pre-COVID-19 preparedness and vulnerability in Nigeria

Nigeria, Africa's most populous country, has dealt with epidemics and pandemics in the past, and most recently experienced Ebola virus epidemic [32]. Nigeria was successful in its response to the Ebola epidemic, controlling the outbreak within three months [33]. Over the past 10 years, Nigeria has established intercountry and regional collaborations that allow regions to share resources [30]. Ifeanyi Nsofor, a senior New Voices fellow at the Aspen Institute and director of policy and advocacy at Nigeria Health Watch, claimed that NCDC has been

investing in epidemic preparedness for the past three years, establishing Public Health Emergency Operations Centers (PHEOCs) in 23 out of the 36 states which "help states to detect, prevent, monitor and respond to infectious disease emergencies," adding that Nigeria's experience in managing the Ebola outbreak also helped it to be better prepared for COVID-19 [34].

Before the spread of COVID-19 to Nigeria, Gilbert and colleagues [35] had conducted a modeling study concerning the preparedness and vulnerability of African countries to respond to COVID-19. Using the WHO International Health Regulations Monitoring and Evaluation Framework to analyze preparedness, Gilbert *et al.* [35] found that Nigeria scored low in laboratory capacity, but received the maximum score for International Health Regulations Coordination capacity. In all, Nigeria was predicted to have a moderate capacity to control an outbreak of COVID-19 [35]. Unfortunately, Gilbert *et al.* [35] also found that Nigeria is particularly vulnerable to exposing citizens to COVID-19, given its limited capacity to isolate and quarantine individuals through the unavailability of sufficient bed space and clinical care.

In mid-January, 2020, Nigeria had set up the Coronavirus Emergency Operation, headed by Aderinola Olaolu, which began a public information campaign to highlight the importance of personal hygiene and proper cough etiquettes, as well as a case definition with health care workers [35]. Nigeria

had also established a network of state and public health emergency network centres, had individuals trained in contact tracing and treating of patients, and had set up five testing laboratories in preparation for the COVID-19 pandemic.

### **The impact of COVID-19**

COVID-19 is an infectious disease which affects individuals of all age groups [24], with multi-faceted negative impact on infected individuals. COVID-19 is known to particularly target the elderly as well as men [36]. Currently, there is no reason to suggest that the demographics of those infected in Nigeria differ in any way from those of other countries. Additionally, Nigeria has an especially small population of those aged 80+ years, with just under 0.2% [36]. In a simulated scenario, Dowd *et al.* [36] found a much smaller projection of deaths (142,056) related to COVID-19 compared to a country like Brazil, where 2% of its population is aged 80+ and was projected to have 452,694 deaths. However, the authors also caution that underlying co-morbidities such as diabetes, hypertension, and chronic obstructive pulmonary disease could change these estimates [36].

COVID-19 is often accompanied by several clinical conditions including severe pneumonia, acute respiratory distress syndrome, septic shock and multi-organ failure [5]. Clinically, COVID-19 decreases total white blood cell, lymphocyte, or platelet counts [13], thus depressing immune system function. Therefore, when individuals with low immune function, such as older people, people with diabetes, people with HIV infection, people with long-term use of immunosuppressive agents, and pregnant women, are infected with COVID-19, there is a risk of poorer clinical outcome [25,37]. Public health emergencies such as COVID-19 have the potential to trigger negative emotions and to damage psychological health [4]. Studies have shown that COVID-19 has resulted in fear anxiety, depression, indignation and sensitivity to social risks [4,38]. In a study by Zhang and Ma [39], 52.1% of participants felt horrified and apprehensive due to the COVID-19 pandemic.

Certain strategies have been put in place globally to help curtail the spread of the pandemic around the globe. These include proper hand washing, respiratory hygiene and physical distancing; heightened levels of contact tracing and

self-quarantine or isolation; strengthening infection prevention and control measures in health facility; preparation of health systems for a surge of severely ill patients [40]. Although these strategies appear to be effective in the containment of COVID-19 in high-risk areas, the negative impact on individuals with and without the disease is unprecedented [41,42]. It has resulted in mental health deterioration among people who are vulnerable, particularly those who are isolated or have existing mental health difficulties [43].

In order to ensure compliance with public health measures, lockdown was enforced in various countries. For the elderly whose usual social contact is out of their home, at social events, places of worship and health care facilities where they go for check-up, self-isolation could place them at additional risk [36]. For health care professionals, coping with the psychological distress of losing patients, as well as the lack of clarity and unpredictability within their work environment, while trying to protect their own health [42], places them at risk of psychological problems. It has been predicted that the fear and anxiety of falling sick or dying helplessly during COVID-19 lockdown, may drive an increase in 2020 suicide rates [44], if measures are not put in place to forestall the negative impacts of COVID-19 at individual level.

The impact of COVID-19 is not limited to health only; the global economy is also not spared [45-47]. Organizations and social institutions across the globe are affected gravely. This can be explained by either of these two reasons: one, the rapid spread of the pandemic worldwide which has bred high uncertainties in economic development leading to a turbulence in financial and capital markets [48]; two, lockdowns and restrictions imposed on movement of people and transportation have nearly halted economic activities [49]. The International Monetary Fund estimated that there would be a global economic recession in 2020 and that the economic growth would decline to -3% [50].

### **Impact of COVID-19 at individual level in Nigeria**

On 30<sup>th</sup> March, 2020, the Nigerian government declared a total lockdown in three states of the federation with the highest number of cases, while other states were placed on partial lockdowns with curfews [51]. COVID-19 has affected all people in Nigeria, including the rich, poor, homeless, older persons, people living with disability and people of all climes and therefore unites us with a single goal. But the lockdown weighed most heavily on the poor, who are often part of the informal economy and are

thus dependent on day-to-day sales for survival. For many of them, a day without work means a day without food. Trade and financial sectors have been affected due to the COVID-19 pandemic and has resulted in loss of jobs for many. Families whose breadwinners have lost their jobs have been more severely affected by this.

Evidence has shown that Nigerians have relatively high knowledge, correct attitude and skills about COVID-19. A study by Olapegba *et al* [52] showed high knowledge as regards source, transmission, symptoms, preventive behavior, fatality rate and major sources of information about COVID-19 among Nigerians. However, some Nigerians still have little knowledge due to superstitions and ignorance of the science behind the virus. Cases of chloroquine toxicity has been reported in Nigeria during this pandemic as a result of misinformation [53]. A study by Olapegba *et al* [52] found that a large percentage of Nigerians hold the view that COVID-19 is a biological weapon designed by the government of China, while some believe that COVID-19 is a plague caused by sin and unbelief of humans. These beliefs have resulted in carefree attitudes among Nigerians, with focus on prayers and spiritual healing with neglect of hygiene practices and safety precautions.

Some individuals have reported a change in lifestyle such as increased level of personal hygiene, social distancing, use of protective masks, increased stay-at-home periods and avoidance of public places and transports, desisting from smoking and alcohol to help maintain a healthy immune system. The physical activity level of individuals has been on the decrease due to the stay-at-home mandate. In a country like Nigeria with a population of over 200 million in which the young make up a large percentage of the population, that is a problem. There have been lots of campaign on social media to sustain the physical fitness of individuals while they stay at home and stay safe. In terms of emotional changes, individuals have reported more negative emotions such as depression and anxiety due to the pandemic, according to some studies in China [38,39]. Although there are no readily available research to corroborate this in Nigeria, it is expected that a good number of Nigerians would feel the same and even more, now that the level of poverty is on the rise. Inadequate social welfare programme by the government such as food stamps, temporary cash transfer and unemployment benefits, has made survival difficult for many families [54]. Despite the outweighing negative effect of the pandemic, the goal is to reduce

morbidity and mortality due to COVID-19, mitigate the negative impact of the pandemic in all aspects of life and ensure effective and safe return of people to their lives post-COVID-19.

### **Impact of COVID-19 at interpersonal level in Nigeria**

Nigeria, like other countries, has tried to adopt some measures to curb the spread of the virus whilst ensuring the safety of citizens. The impact of COVID-19 and its control measures on interpersonal relationships has been both positive and negative. Li *et al* [4] reported that COVID-19 has caused strain on interpersonal relationships in China, as people tend to get more concerned about their personal and family health and less concerned about leisure and friends. This finding is corroborated in Nigeria by reports generated from the opinions of some citizens, as there is a dearth of published studies from Nigeria. This is not far-fetched because people are forced to stay home with family members. Anecdotes from Nigeria have shown that some individuals have found this pandemic as a period to bond with family and friends, increase shared feelings, support and care for one another. Parents who never had time for their children due to work and social activities are now forced to have and spend great time with their spouse and children [55].

With the ban of public gatherings and celebrations such as parties, hangouts, sports and the likes, some people have reported to feel lonelier and have turned to social media to help improve their interpersonal relationships. Restrictive measures have made staying at home a matter of compulsion, rather than a choice. This has resulted in an upshoot in the cases of domestic violence [56]. Cases of social vices and thefts have also doubled during the COVID-19 pandemic, as unemployed individuals have resorted to these devious means for survival and individuals in affected communities are beginning to live in fear both day and night [57]. People have taken to virtual friendships during the pandemic. Real friendship, however, requires a great deal of physical contact, engagement and interaction all of which is difficult to achieve through virtual means.

### **Impact of COVID-19 at organisational level in Nigeria**

All organizations and social institutions in Nigeria have been affected by the COVID-19 pandemic. Schools and other educational institutions were closed up, with compulsory examinations postponed

indefinitely and most school children remaining at home [43]. Banks and other trade institutions have been affected, with stringent measures put in place to maximize limited resources. The implications of the COVID-19 pandemic on the economy are now apparent from the demand and supply of goods and services. Demand has been affected by the lockdown, with consumers staying at home. On the supply side, factories are shutting down and cutting down production and output, while in other instances, staff work from home to limit physical contact [58]. Some private institutions have almost folded up, while some have slashed the salaries of their staff, all as a result of the impact of COVID-19 on the economy.

Due to the imposed lockdowns and restrictions in the country, some organisations rendering non-essential services such as leisure and recreation services, entertainment services, sport clubs amongst others have been rendered non-functional. This may have led to overwhelming demands on organisations providing essential services and increased inter-relationship among organisations for the purpose of supporting one another. To our knowledge, studies on the social and economic impact of COVID-19 on organisations and communities are still on-going in Nigeria. However, anecdotal evidence suggests that there is a positive economic impact on telecommunications companies in Nigeria. Many individuals have had to expend a lot of money on internet connectivity for communication and interactions on various media platforms while educational sector has been impacted negatively, with most institutions closed till further notice and online teaching platforms not readily accessible in a low-resource setting like Nigeria.

Due to the COVID-19 pandemic, several organisations have had to suspend their activities. For example, the National Sports Festival which was initially scheduled to hold from 22<sup>nd</sup> March to April 1<sup>st</sup> was postponed indefinitely. The Nigerian Football Federation also followed suit in suspending all activities. The National Youth Service Corps (NYSC) suspended the twenty-one days orientation camp for prospective Corp members. The plenary activities for Nigerian Senate and the House of Representatives were also adjourned. Religious gathering and gatherings of more than fifty people such as parties, conferences and the likes were banned. All primary, secondary and tertiary institutions were closed indefinitely. Majority of people were forced to work from home and movement around the country was limited as travel ban was placed on countries with high cases of the virus and interstate movement

within the country was banned. Despite these measures, the number of cases in the country continued to rise. The next course of action was a two-week total lockdown in high-risk states in the country which began on the 30<sup>th</sup> of March, 2020 and was extended by another two weeks on the 14<sup>th</sup> of April, 2020 [59]. These measures however came with some consequences on individuals, organisations and the country at large.

### **Impact of COVID-19 at community level in Nigeria**

The COVID-19 pandemic has a potential to cause community anxiety as a result of the surging number of confirmed cases, diverse media reports and fatality case [38]. The financial implications within the communities are profound, although the government has implemented various supportive measures [43] such as distribution of food and money as palliatives. For a country like Nigeria, where a vast majority in some communities are low- and daily-income earners, the prospect of staying at home could lead to hunger among the masses. Irrespective of the positive aspects of lockdown, fears remain that the number of deaths as a result of lockdown measures be greater than those due to infection [5]. The virus is also taking its toll on health facilities and infrastructures within communities. Testing, isolating and treating people with COVID-19 and tracing their contacts is challenging in places with weaker health systems [1]. Some hospitals and health facilities that cannot handle the hazards are operating below their capacity by taking a few regular health-related cases or shutting down [58].

A worrisome issue has been raised in some communities on the unhealthy practice of picking up face masks from dumpsites for sale. This issue was raised by the Presidential Task Force on COVID-19 [60]. This could increase the spread of the virus within the community. We opine that this practice of picking face mask from dumpsite however is a result of poverty and ignorance. It is interesting to declare that Nigerians have resorted into making face masks from cotton materials which are reusable, thereby reducing the cost from purchase of medical face masks.

### **Impact of COVID-19 on public policy in Nigeria**

A big threat to global health has been posed by this novel disease [20] and the global community has been racing to slow down and eventually halt the spread of COVID-19 [1]. In response to the COVID-19 pandemic in Nigeria, several policies have been

enacted by the government. From March 9, 2020, some actions were embarked upon by the Nigerian presidency at the initial stage in response to COVID-19. The actions included:

March 9: Establishment of a Presidential Task Force for the control of the virus.

March 18: Travel ban on visitors from COVID-19-endemic countries.

March 20: Closure of all educational institutions.

March 20: Closure of international airports in Enugu, Port Harcourt, and Kano states.

March 23: Suspension of all railway services.

March 21: Closure of the Abuja and Lagos international airports.

March 24: Closure of all court houses within the country.

March 24: Closure of all religious centres and non-essential organisations.

March 27: The Head of Civil Service of the Federation (HCSF) directed public servants on Grade Levels 12 and below on non-essential roles to work from home.

March 29: Closure of land borders.

March 30: Signing of COVID-19 Regulations into law and declaration of lockdown.

March 31: Lockdown began in FCT and Lagos [61].

The Nigerian federal government has since then taken additional measures. The NCDC drafted recent retirees back into service “to beef up manpower”, as well as ordering all NCDC staff and experts who were away to return immediately. The Nigerian Air Force (NAF) was deployed to evacuate and transport Nigerian specialists from Central Africa [61]. NCDC also launched a WhatsApp APL, a free-to-use service which provides “a central source of accurate, verified and current information on COVID-19 in Nigeria” [61]. This was in addition to a toll-free NCDC hotline, available 24/7, as well as various state hotlines that could be called for direct state-specific questions on COVID-19 [61].

On June 2, 2020, the federal government of Nigeria released guidelines for easing of lockdown restrictions across the country. Nationwide curfew was imposed between the hours of 10pm to 4am, restricted opening of religious places of worship and the probable resumption of domestic flights by aviation industries, schools were to remain closed amongst others. Despite being initially praised for its response to the COVID-19 epidemic, some have criticized the Nigerian government’s response. According to a letter published in *The Lancet Respiratory Medicine* written by Bernard Kalu, despite all promises made by the president on palliative measures (fund and food dispersal),

only a small proportion of the Nigerian population has received support [62]. Additionally, Kalu reported that many citizens have disobeyed the lockdown order “in the hope of making sales or trying to earn money through other services, but they were apprehended by the police” [62]. Additionally, Amnesty International issued a statement on April 1, 2020 imploring Nigerian authorities to uphold humans’ rights amid reports that law enforcement agents were beating citizens who were not complying with the lockdown [63]. On April 16, the British Broadcasting Corporation (BBC) published reports from the Nigerian National Human Rights Commission that security forces enforcing lockdown orders had killed more people than COVID-19, with 12 deaths attributed to the virus at the time and 18 deaths attributed to security forces [64].

### Conclusion

The impact of COVID-19 is diverse and cuts across all individuals, families, organisations, communities and states in Nigeria. The Nigerian government has enacted several policies in the bid to curb the spread of the pandemic, while ensuring the sustenance of livelihood as much as possible. Currently, the number of confirmed cases of COVID-19 cases in Nigeria are beginning to decline. Therefore, the government has relaxed ban on religious gatherings, lifted local and international travel ban and relaxed curfew. Economic activities are being restored and schools at all levels have been reopened. In the midst of these, Nigerians are advised to continue to keep to all safety measures in order to bring the number of confirmed COVID-19 cases to the barest minimum, till it is eventually eradicated.

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