

Covid-19: impact on Nigeria

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Abstract

Any kind of disease not even destroying the public health, but also affects the social and economic values, such condition are more severe when it is a pandemic infection. Nigeria is one the country around the world, who faced so many epidemic conditions in past such as Ebola, Yellow fever, Cholera, Avian Influenza, Lassa fever etc. Currently it again facing a new pandemic situation named COVID-19, first case was reported on Feb 27, 2020 and till mach around 27 suspected cases was identified and two out of 27 were positive towards COVID-19. However, Nigeria has limited source and facility, but Nigeria authority's asses each state, providing necessary information and take all necessary steps to curb the spread of the disease. Current report involved past pandemic situation, and current status of COVID-19 with preventive measures taken by Nigeria authority.

Keywords: Nigeria, COVID-19, lassa fever, economy, SARS

Introduction

As per World Health Organization (WHO), the total area of the country is 923,768 Km² which is almost four times of U K, nation has a population around 185,990,000, making it the seventh most populous country in the world. It has gross national income per capita around 5,360 and spends around 3.7 % of total expenditure on health as % of GDP. Capital city of Nigeria is Abuja, located in centre of the nation, while Lagos being the primary port and economic hub of the nation¹. Some of the most spoken language in this country is English and most followed religion is Christianity (58%) and Islam (41%). With abundance of natural resources, Nigeria is Africa's biggest oil exporter and has largest natural gas reserves in the continent.

Apart from this Nigeria faced so many pandemic situations in last 20 years, Ebola, Yellow fever, Cholera, Avian Influenza, Lassa fever are few of them which not even breaks the health of the people but also develops the social economic crisis shown in table 1. Out of these several pandemic diseased faced by Nigeria, Lassa fever (viral hemorrhagic fever) caused by *Arenavirus*, transmitted from rodents to humans, firstly discovered in year 1969 and again in year 2012, caused around 300,000–500,000 infections/year, 5000 deaths in all age groups and sexes². It was noticed that the incubation period was 5–21 days characterized by fever, headache, malaise, pain, cough, bleeding, neck/ facial swelling, and shock and the case fatality was 15% and 20%.

Table 1: Nigeria past pandemic situations including, disease, years of occurrence, causes, nature and clinical symptoms.

S. No	Disease	Years of occurrence	Cause	Nature	Clinical Symptoms
1.	Yellow Fever	2000, 2017, 2019, 2020.	Yellow fever virus (YFV), an arbovirus of the <i>Flavivirus</i> genus	Asymptomatic	Fever, Muscle pain with prominent backache, Headache, Loss of appetite, and Nausea or Vomiting.
2.	Cholera	2000, 2001, 2004, 2005, 2010, 2017.	Ingestion of food or water contaminated with the bacterium <i>Vibrio cholerae</i> .	An acute enteric disease varying in severity.	Most people infected with <i>V. cholerae</i> do not develop any symptoms; Among people who develop symptoms, the majority have mild or moderate symptoms, while a minority develop acute watery diarrhoea with severe dehydration.
3.	Meningococcal	2004, 2009, 2015, 2017.	The bacteria, <i>Neisseria meningitidis</i> is transmitted from person-to-person through droplets of respiratory or throat secretions from carriers.	Serious infection of the meninges that affects the brain membrane.	The most common symptoms are a stiff neck, high fever, sensitivity to light, confusion, headaches and vomiting.
4.	Ebola Virus Disease	2014-2016	Fruit bats of the Pteropodidae family.	Acute, serious illness	Fever, Fatigue, Muscle pain, Headache, Sore throat, Diarrhoea, Rash.
5.	Lassa Fever	2012, 2016-20	Lassa virus, a member of the arenavirus family of viruses.	Acute viral haemorrhagic illness	Fever, General Weakness,

					Malaise, Headache, sore throat, muscle pain, chest pain, nausea, vomiting, diarrhoea, cough, and abdominal pain
6.	Avian Influenza	2006-08	Influenza A viruses, mainly by coming in contact of poultry animals.	-----	Mild upper respiratory infection (fever and cough) to severe pneumonia, acute respiratory distress syndrome (difficulty breathing), shock and even death.

Etiology of Covid-19

Chinese Center for Disease Control and Prevention (CDC), reported a novel virus belonging to coronavirus (CoV) family in November 2019, named 2019-nCoV³ and International Committee on Taxonomy of Viruses (ICTV) coined it as SARS-CoV-2 virus, and its disease "COVID-19" in Feb 2020. It is highly contagious and spreads quickly via human-to-human transmission and infected more than 100 countries caused one lakhs cases and thousands of deaths globally. The word coronavirus originated from *coronam* means crown, it has single strand RNA, crown-like microscopic appearance, belongs to *Coronaviridae* family, having N S proteins, and has 89% nucleotide similarity with bat SARS as shown in figure 1.

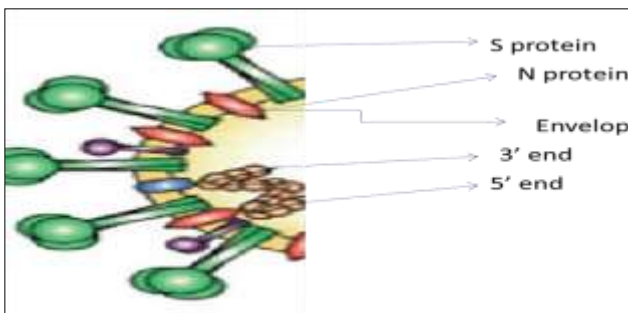


Fig 1: Structure of COVID-19

SARS Co V-2 in Nigeria

In year 2019, WHO office in China received cases of patient suffered from pneumonia came from Wuhan, central China, and within two months it infected more than 2.5 lakhs people around world and scientist called this COVID-19 disorder, caused by novel Beta-coronavirus (SARS-CoV-2), causing fever, difficulties in breathing etc possess almost same clinical symptoms and also originated from same virus species. However earlier world already faced situation named MERS and SARS caused by same coronavirus. The first case was reported by Nigerian Government on February 27th, 2020, similar to Ebola, the COVID-19 was also imported through the airport and till March 9, 2020, around 27 suspected cases⁴ were identified in five states of the nation named Edo, Lagos, Ogun, Federal Capital Territory, and Kano and clinical reports confirmed two COVID-19 patients out of 27 without any death. Although, WHO report of 5th April 2020, confirmed 210 cases with 20 death in nation.

Preventive measure

Covid-19 spreading all over the world in very short period of time and Nigeria it caused 07 deaths and 288 cases out of which 158 are from Lagos state only. So, protect people of Nigeria, the Government and Africa Centres for Disease Control and Prevention (Africa CDC, also committed for providing US\$25 million fund) taken several steps such as

boosted risk communication and healthcare preparedness with enhancing the surveillance points everywhere etc for COVID019 outbreaks, are as follows:

1. Boosted risk communication and healthcare preparedness
2. Increasing the surveillance points throughout the nation
3. Organizing training sessions for COVID-19
4. Enhancing the testing facilities
5. Providing a central framework through which individual African countries can access essential support
6. Two-week lockdown imposed by President Muhammadu Buhari in lagos

Effect of Covid-19 on Nigeria Economy

Since 2016, Nigeria trying to recover from the pandemic threat, which leads to big economic recession due to this Oil and Natural gases sector, saw a down slop Global level. In 2020, whole world face new pandemic situation named Corona infection⁵ which ruin the world economy including both developed countries (Italy, China, America etc) and developing countries (India, Nigeria, Pakistan etc). The increasing effect Covid-19 causes some drastic changes in the Expenditure Budget of Nigeria and Fiscal Policy of 2020.

Conclusion and Discussion

However, unlike polio and Ebola, the COVID-19 has neither a vaccine nor any clinically approved treatment available till now. Researchers are searching new molecules for the same and we hope very soon we get something in our hand, although, timely taking preventive measures somehow prevent the number of patients and deaths cases worldwide. Developing countries like Nigeria it is mandatory that have to follow the guidelines provided by WHO and other organization regarding COVID-19. We only hope for the best, that very soon we will defeat this deadly situation.

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Authors Contribution

All authors have contributed equally.

Conflict of Interests

Nil

References

1. Ajayi NA, Nwigwe CG, Azuogu BN, Onyire BN, Nwonwu EU, Ogbonnaya LU, *et al.* Containing a Lassa fever epidemic in a resource-limited setting: Outbreak description and lessons learned from Abakaliki, Nigeria. *Int J Infect Dis*, 2013; 17:e1011-6.

2. Fatiregun AA, Isere EE. Epidemic preparedness and management: A guide on Lassa fever outbreak preparedness plan, Niger Med J. 2017; 58(1):1-6.
3. Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R. COVID-19 infection: Origin, transmission, and characteristics of human Coronaviruses, Journal of Advanced Research, 2020; (24):91-98.
4. Ebenso B, Out A, Can Nigeria contain the COVID-19 outbreak using lessons from recent epidemics, 2020. DOI: [https://doi.org/10.1016/S2214-109X\(20\)30101-7](https://doi.org/10.1016/S2214-109X(20)30101-7)
5. <https://www.cgdev.org/blog/economic-impact-covid-19-africa-weeks-latest-analysis>