



African Indigenous  
Knowledge System  
and the Fight  
Against Covid-19  
Pandemic:  
Assessing Nigeria's  
Level of  
Preparedness

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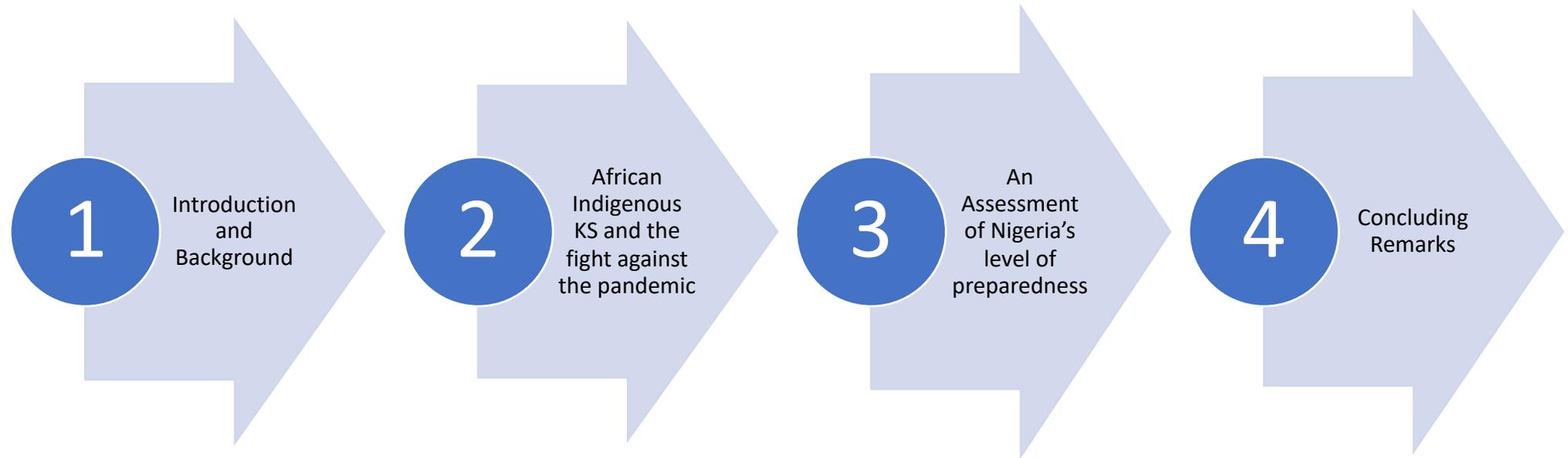
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# Housekeeping

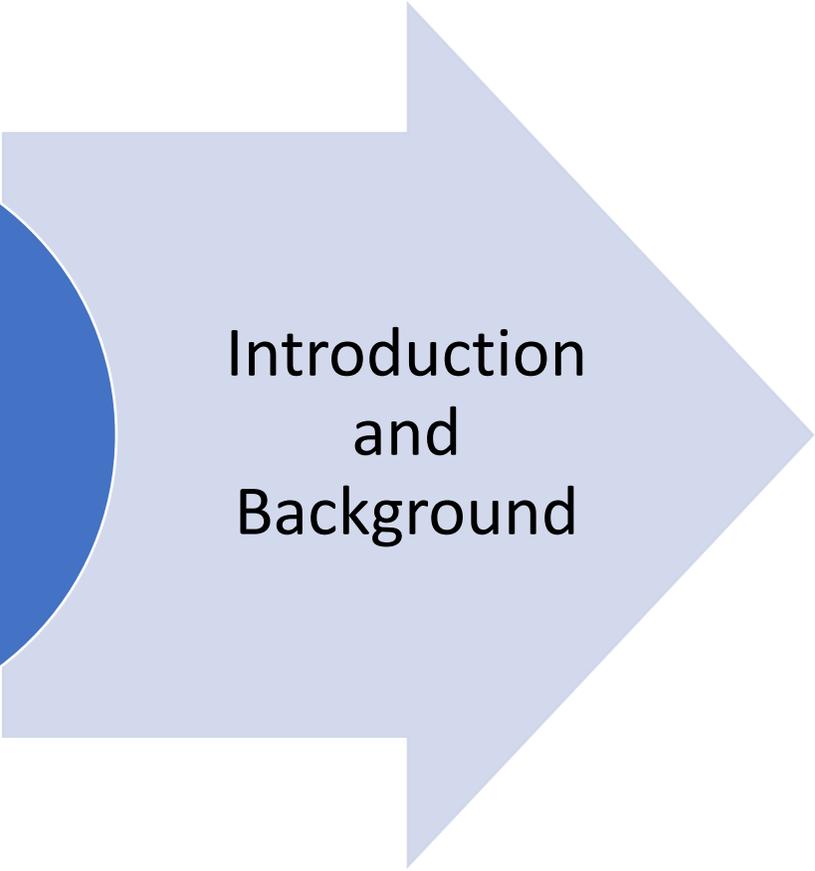


# Outline





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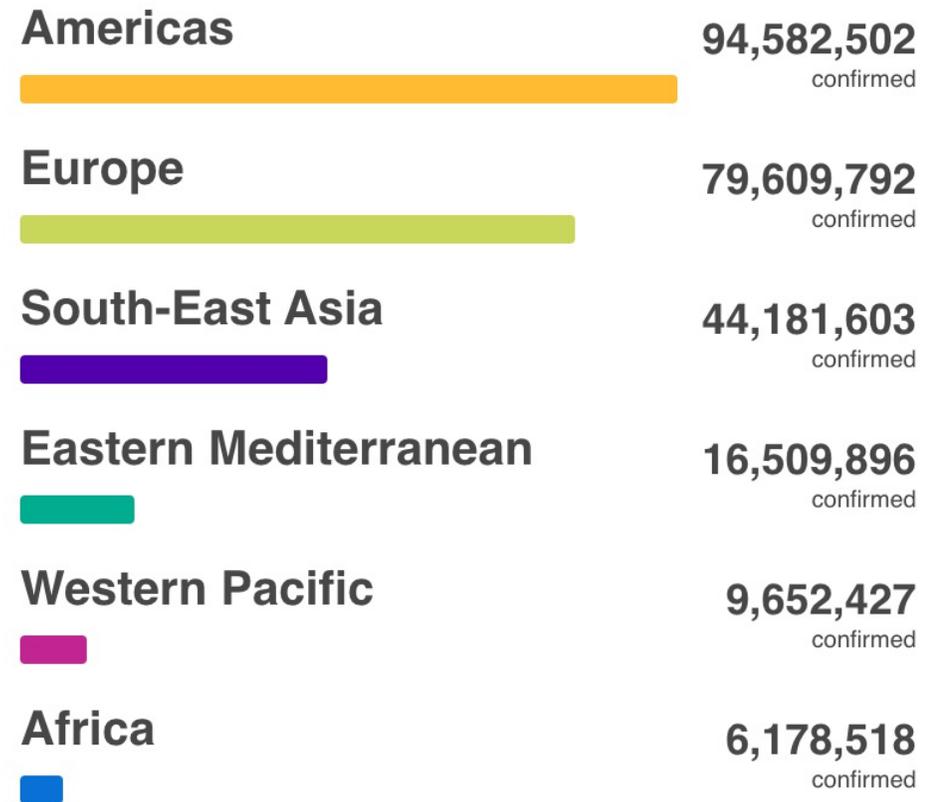


Introduction  
and  
Background

# Introduction

- Ever since the outbreak of Corona Virus in a small Chinese city of Wuhan in Hebei Province late in 2019, the entire world space has known no peace.
  - Fears, disruptions, uncertainties
- The pandemic disease has proven to be one of the deadliest history has ever recorded.
- The worrisome upsurge in the level of infections across the world prompted the World Health Organization to declare the virus a pandemic
- According to the WHO dashboard as of 6:38pm CET, yesterday:
  - 250,715,502 confirmed cases
  - 5,062,106 deaths

## Situation by WHO Region



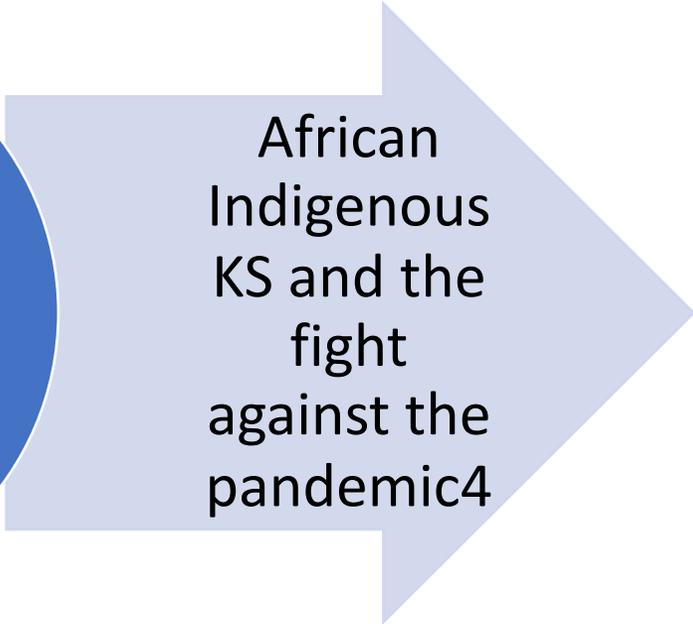
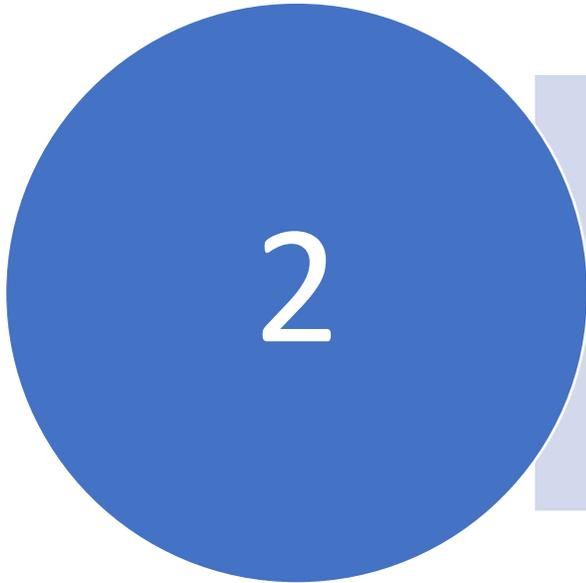
Source: <https://covid19.who.int/>

# Introduction Cont'd

- Africa generally, and Nigeria in particular, is less vulnerable to infections of the covid virus when compared with other advanced nations of the world.
- Since the outbreak of the pandemic, developed countries such as the United States of America, France, Germany, Canada and many others have embarked on research innovations to be able to tackle the virus headlong.
  - Result: Ccovid-19 medications and/or vaccination
- Unfortunately while US alone has recorded the administration of about 190 million doses; China, 1.05 billion, India 190 million persons fully vaccinated, and Brazil, 109 million, the vaccination rates and responses are still low in Africa
  - Conspiracy theories over the emergence of the vaccines

Location	Cases	Deaths
USA	46.8M +98,390	759K +1,637
India	34.4M +13,091	462K +340
Brazil	21.9M +12,273	610K +280
The UK	9.41M +39,325	142K +214
Russia	8.76M +36,896	246K +1,206

Source: <https://ourworldindata.org/>



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## African's Reality

- The symptoms of covid-19 like fever, shortness of breath, fatigue, confusion, drowsiness, pneumonia, among others
  - These have always been with us
- The risk of infection is higher in elderly patients with underlying health challenges than in young people
  - We have a young population



# African's Reality Cont'd

- Indigenous plants, herbs and spices have been used
  - Preventive
  - Palliative
  - Management of COVID-19
  - Studies reveal over 30 plant species and recipes and other essential ingredients such as rock salts, salt, hot water, mentholatum ointment, honey, olive oil, bi carbonate as well as urine extracts from humans.
- Plant extracts, aside from other substances takes the form of tree backs, herbs shrubs, trunk, flower, leaf and bulb
- Fruits such as as pawpaw, mango, avocado, ginger, garlic, among others, can be effectively sued to treat symptoms associated with covid-19 infection such as fever and gastro-intestinal disorders



**Table 1:** African indigenous knowledge system for the cure of covid-19

S/N	Name of plant (family name)	Botanical name	Common name	Part of plant used for cure of covid-19	Reported anti-viral effects on patients
1	Amaryllidaceae	Allium sativum	Garlic	Bulb (Herb)	Inhibits effects of virus on bronchitis when taken
2	Amaryllidaceae	Allium cepa	Onion	Bulb (Herb)	Inhalation attacks mild infection at infant stage
3	Asparagaceae	Aloe vera Burm	Aloevera	Leaf (Herb)	Inhibits of multiplication of covid-19 virus
4	Anacardiaceae mangifera Indica	Mangifera Indica	Mango	Leaf (Tree)	Has potency for killing virus in respiratory tracks
5	Bromeliaceae	Ananas Comosus	Pineapple	Fruit (Herb)	Improves rate of severe cough in covid-19 patients
6	Caricaceae	Carica papaya	Paw paw	Bark (Tree)	Active against covid-19 virus
7	Lauraceae	Persea Americana	Avoado tree	Leaf (Tree)	Strongly inhibits activities of virus in patients
8	Nil	Gossypivum arboretum	Cotton	Leaf (Shrub)	Acts against virus activities in patients
9	Moringaceae	Moringa oleifera	Moringa	Leaf (Tree)	Acts as antiviral antidote against covid-19 virus in patients
10	Myrtaceae	Psidiumguajava	Guava	Leaf (Tree)	Anti-viral substance against infection.
11	Nil	Eucalyptus globules	Eucalyptus	Leaf (Tree)	Effective against virus in patients.
12	Zingiberaceae	Zingiber officinale Roscoe	Ginger	Rhizome (Shrub)	Act against virus infection.

**Source:** Culled from Patrick Valere, et al (2020): Ethnobotany Research Applications

# Outline

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An  
Assessment  
of Nigeria's  
level of  
preparedness

## The unprepared World

- The Response To COVID-19
- Learning from past Outbreaks through Data?
- The 1918 flu pandemic
- SARS
- Ebola
- ...
- Not much preparations for major outbreaks
- Each major outbreak is different though, and experts have a hard time predicting how they will end
- The fallout of each disease largely depends on other circumstances — when we catch it, how contagious and fatal it is, how hygienic people are, and how quickly a vaccine or cure becomes available.
- Preparing For Future Outbreaks Consequences

# The Sciences of COVID-19

- Natural (Bio) Sciences
  - Testing
  - Vaccines
  - Treatments
- Communication Sciences
  - Informing
  - Combating Misinformation
- Social Sciences
  - Supports
  - Counselling
- ...
- Data Science
  - Realizations
    - Relevance of ML and AI in the scheme of things
    - Need for science to play a role based on data that are trustworthy, etc

## Nigeria's preparedness and response

- Since the first case was reported in February 2020, Nigeria has put in a lot in placed to mitigate the effects of the pandemic
  - Strengthening of the Nigerian Centre for Disease Control
  - Establishment of the National Emergency Operation Centres for contact tracing and testing
  - Closure of all borders, schools, gatherings
  - Constitution of the Presidential Task Force on covid-19
  - COVID-19 Research funds for higher institutions and research agencies



## Nigeria's preparedness and response Cont'd

- COVID-19 daily updates, information dashboards
- Establishment of isolation centres in states across the country
- Free treatment and management of all reported cases
- Enlisting the help of the private sector
  - Palliatives, funding, safety nets
- Deployment of non-pharmaceutical measures such as
  - enforcement of changed behaviour –crowd control in public places, use of nose masks, washing of hands, etc



# Conclusion

- The COVID-19 pandemic is another opportunity for Africa to demonstrate resilience.
- The applications of African indigenous knowledge system in the fight against the corona virus or covid-19 pandemic has been examined in this paper.
- The paper has also examined the Nigerian Federal Government's level of preparedness in the wake of the rising tides of the pandemic and beyond.
- What the study has discovered is that Africa generally, and Nigeria in particular, has made ambitious strides in the control of the pandemic against the expectations of the rest of the world.
  - The effective application and use of traditional medicine and herbal substances as it widely practiced have proven that the continent has all it takes to tap and harness its contents and technology for the growth, development and survival of its people.
  - Again, the study has proved that contrary to world views which has subjected the continent to a second fiddle in the international global arena, the continents and its people possess the required potentials and skills that can compete favourably with her peers all over the world.

# Recommendations

- Governments and administrations of the African states should invest in research to strengthen the use of African indigenous knowledge in the healthcare system
- There is the need for showcasing (with empirical evidence) the indigenous African knowledge systems as innovations
- Indigenous knowledge in the campaign against covid-19 should be given global acclaim. Africa and its local technology should now be duly recognized as an outstanding traditional medical therapy that can be enhanced, further promoted and developed, not only for the covid-19 pandemic, but also used and kept for a foreseeable future should in case any such misfortunate strikes the face of the earth and its people ever again.

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