



# NIGERIA COVID-19 RESEARCH PLAN 2020-2024

Table of Contents

INTRODUCTION.....2

VISION .....2

MISSION.....2

OBJECTIVES OF THE PLAN.....2

RESEARCH PRIORITIES.....2

    EXPECTED OUTCOMES.....6

METHODOLOGY.....7

MONITORING AND EVALUATION .....7

RESEARCH OPERATIONALIZATION.....7

Appendix I: Research Matrix .....7

ORGANIZATIONAL STRUCTURE.....7

## **INTRODUCTION**

This document maps out the research plan for the multi-sectoral research project on COVID-19 in Nigeria. The purpose and aims, as well as rationale for the project will be presented, together with the operationalization of the research. Research priorities will be identified in line with the WHO global roadmap, and research areas proposed. The consortium has brought together diverse institutions who will engage in various research projects to generate the much-needed evidence on COVID-19. These research projects become enablers to the exploration of COVID-19 research questions and national response.

## **VISION**

To generate research evidence that will provide knowledge about COVID-19 that can inform decision making at national and sub-national levels.

## **MISSION**

To deliver high quality research that is relevant locally and globally.

## **OBJECTIVES OF THE PLAN**

The objectives are:

1. To produce relevant and timely research on COVID-19 in Nigeria.
2. To conduct COVID-19 related research to the highest international scientific and ethical standards.

## **RESEARCH PRIORITIES**

Ten thematic areas of research (contextualized from the WHO global roadmap with one additional theme) are shown in the matrix below with further categorization into short, medium and long-term focus (Table 1). From these thematic areas, the following research priorities are identified:

### **SHORT-TERM**

- Transmission studies (transmission dynamics- primary, secondary, tertiary & quaternary transmissions; feco-oral transmissions; sexual transmissions, vertical transmissions, asymptomatic & pre-symptomatic viral shedding, etc.)
- Environmental surveillance studies
- Decontamination studies
- Investigation of possible contact exposure of pets especially cats and dogs to human owners diagnosed with COVID-19 in order to exclude "reverse zoonoses"
- Studies on the clinical epidemiological of COVID-19 as well as clinical progression.
- Virus shedding in symptomatic cases.
- Assessment of diagnostic accuracy and reliability of seroassays/validation of ELISA kits for COVID-19.

- Adjunctive & supportive therapy
- Standard of care research
- Evaluation of clinical interventions e.g. steroids, high flow oxygen, NSAIDs
- Clinical Prognosis studies
- Nosocomial infections of COVID-19
- KAP studies on HCWs as well as identifying the determining factors to inform context-appropriate interventions.
- Understanding the barriers and facilitators to non-compliance to IPC measures (e.g. PPE) among health professionals and community members in Nigeria.
- Clinical trials on existing therapies (CQ, convalescent plasma, Remdesivir, Lopinavir-Ritonavir, interferon, phyto-therapeutics; etc)
- Ethical standards in COVID-19 Research
- Research governance framework for collaborative research
- Behavioral studies on NPIs (population studies & community surveys)
- Explorations of local barriers and enablers for the uptake and adherence to public health measures for prevention and control.
- Assessment of the secondary impacts of public health measures, such as the use of surgical masks, in the community.
- Identification of the burden associated with COVID-19 outbreak response and implementation of public health measures.
- Identification of the underlying drivers of fear, anxiety and stigma that fuel misinformation and rumour, particularly through social media.
- Public health systems & interventions e.g.  
Effect of health systems preventive interventions on mental health in COVID -19 pandemic;  
Assessments of Nigeria's COVID-19 emergency preparedness and response plans and activities
- Studies on health delivery systems e.g.  
Effect of COVID-19 pandemic on essential service provision: case study of ANC service delivery  
Impact of COVID 19 pandemic on immunization services in Nigeria;  
Bottlenecks to access of essential healthcare services during COVID-19 outbreak  
Role of Primary Health Care in the control of COVID-19 in Nigeria

### **MID-TERM**

- Pathogenicity studies- asymptomatic versus symptomatic cases.
- Assessing the association between climatic factors/parameters and Covid-19 in Nigeria
- Immunological studies on pets (cats, dogs, etc.) including immune response to COVID-19
- Sero-epidemiological studies, including the identification of community risk factors for COVID-19.
- Ecological studies

- Sero-prevalence studies
- Socioeconomic & health impact of COVID-19 outbreak & lockdown measures
- Role of social networks & safety nets in COVID-19 prevention & control
- Impact of COVID -19 Control interventions on; marginalized communities: Slum dwellers, Prisoners and Refugees.
- The Economic cost, adherence and sustainability of COVID19 control measures on Households.
- Studies on health financing (Universal Health Coverage/Health Insurance; etc)
- Health infrastructure & resilience e.g. Resilience of National health system in disease outbreaks/pandemics: COVID 19, a case study; Responsiveness of research for health in COVID 19 pandemic
- COVID-19 and clinical research units in Health and Academic institutions in Nigeria

### **LONG-TERM**

- Natural History of SARS-CoV-2 in humans.
- Genetic studies.
- Animal reservoirs of SARS-CoV-2.
- Understanding animal-human interface that drive COVID-19 outbreak.
- Clinical epidemiology (Immunological studies)
- Local R&D of medical consumables
- R&D of new therapeutic agents against COVID-19; and Vaccine trials
- Health policies and governance studies
- Healthcare systems  
E.g. Impact of COVID-19 on Nigeria Health system

**Thematic Areas and Research Priorities**

	1. Virus natural history, transmission and diagnostics	2. Animal and environmental research on the virus origin, and management measures at the human-animal interface	3. Epidemiological Studies	4. Clinical Management
<b>Short-Term</b>	-Transmission studies (transmission dynamics- primary, secondary, tertiary & quaternary transmissions; feco-oral transmissions; sexual transmissions, vertical transmissions, asymptomatic & pre-symptomatic viral shedding, etc)  -Validation of ELISA kits for COVID-19	-Environmental surveillance studies  -Decontamination studies	Clinical epidemiological studies -clinical progression - virus shedding in symptomatic cases	Adjunctive & supportive therapy  Standard of care research -Evaluation of clinical interventions e.g. steroids, high flow oxygen, NSAIDs  Clinical Prognosis studies
<b>Mid-Term</b>	Pathogenicity studies- asymptomatic versus symptomatic cases	Climate & COVID-19	-Sero-epidemiological Studies  -Ecological studies	
<b>Long-Term</b>	-Natural History of SARS-CoV-2 in humans  -Genetic studies	-Animal reservoirs of SARS-CoV-2 -Understanding animal-human interface that drive COVID-19 outbreak -Reverse Zoonosis	Clinical epidemiology -immunological studies	Local R&D of medical consumables
	<b>5. Infection Prevention and Control, including Healthcare Workers Protection</b>	<b>6. Candidate therapeutics R&amp;D</b>	<b>7. Candidate Vaccines R&amp;D</b>	<b>8. Ethics Considerations for Research</b>
<b>Short-Term</b>	Nosocomial infections of COVID-19  -KAP studies on HCWs	Clinical trials on existing therapies (CQ, convalescent plasma, Remdesivir, Lopinavir-Ritonavir, interferon, phyto-therapeutics; etc)		Ethical standards in COVID-19 Research  Research governance framework for collaborative research
<b>Mid-Term</b>			Sero-prevalence studies	
<b>Long-Term</b>		R&D of new therapeutic agents against COVID-19	Vaccine trials	
	<b>9. Social Sciences in the Outbreak response</b>	<b>10. Health System Strengthening Research</b>		
<b>Short-Term</b>	Behavioural studies on NPIs (population studies & community surveys)	- Public health systems & interventions e.g. Effect of health systems preventive interventions on mental health in COVID -19 pandemic;  Assessments of Nigeria's COVID-19 emergency		

		<p>preparedness and response plans and activities</p> <ul style="list-style-type: none"> <li>- Studies on health delivery systems e.g.</li> </ul> <p>Effect of COVID-19 pandemic on essential service provision: case study of ANC service delivery;</p> <p>Impact of COVID 19 pandemic on immunization services in Nigeria;</p> <p>Bottlenecks to access of essential healthcare services during COVID-19 outbreak</p> <p>Role of Primary health care in the control of COVID-19 in Nigeria</p>		
<b>Mid-Term</b>	<p>Socioeconomic &amp; health impact of COVID-19 outbreak &amp; lockdown measures;</p> <p>Impact of COVID -19 Control interventions on; marginalized communities: Slum dwellers, Prisoners and Refugees.</p> <p>The Economic cost, adherence and sustainability of COVID19 control measures on Households.</p>	<ul style="list-style-type: none"> <li>- Studies on health financing (Universal Health Coverage/Health Insurance; etc)</li> <li>- Health infrastructure &amp; resilience e.g. Resilience of National health system in disease outbreaks/pandemics: COVID 19, a case study;</li> </ul> <p>Responsiveness of research for health in COVID 19 pandemic</p> <p>COVID-19 and clinical research units in Health and Academic institutions in Nigeria</p>		
<b>Long-Term</b>	<p>Role of social networks &amp; safety nets in COVID-19 prevention &amp; control</p>	<ul style="list-style-type: none"> <li>- Health policies and governance studies</li> <li>- Healthcare systems E.g. Impact of COVID-19 on Nigeria Health system</li> </ul>		

## EXPECTED OUTCOMES

1. Relevant and timely research on COVID-19 to inform national and local response activities.
2. Research output on COVID-19 that is in line with the highest international scientific and ethical standards.

## METHODOLOGY

The research will employ mixed methods to answer the various research questions. A research matrix considering the research questions and sub-questions, variables, and data collection methods is presented in the Appendix I.

## MONITORING AND EVALUATION

A monitoring and evaluation plan (M&E) is being developed to oversee and coordinate the execution of the COVID-19 research consortium. This will help track and coordinate implementation of research activities to ensure real progress towards achieving the set goals. It will also help set up clear accountabilities for all concerned whereby achievements can be determined, constraints identified, lessons and good practices learnt and overall research capacity developed.

The M&E plan will consist of reviews, scheduled evaluation meetings with project leads, determination of evaluation milestones, partner and other stakeholder activities, dissemination and use of information from the researches.

## RESEARCH OPERATIONALIZATION

The consortium is a multi-institution study involving higher education institutions in Nigeria, research institutions, Teaching hospitals, Partners and Government agencies. Appendix II is the organizational structure of the research consortium.

### Appendix I: Research Matrix

Research Question	Sub – questions	Variables of Interest	Data Sources	Methods of Information Collection	Data Collection Tool	Sample Size

### Appendix II

#### ORGANIZATIONAL STRUCTURE

##### Organization Administration

##### Coordinator

##### Role

---

Coordinator

Dr Chinwe Ochu

To coordinate all the affairs of the consortium.

Clerk (x1 person)

Finance officer (x2 persons)

Logistics/planning (x2 persons)

Manager (x1 person)

---

##### Scientists

Universities Treatment centres Laboratories Research institutes, Mini. & Agencies	Dr Nicaise Ndembi	To generate research evidence to inform national response (prevention and control)
--	-------------------	--

Manufacturers Association (R&D unit)

NHREC  
Implementation partners  
Research institutes, Mini. & Agencies

**Strategy, policy and advocacy**

NUC representative FMoH representative	Dr. Noel Saliu	To provide strategic guidance, develop research policies/guidelines and perform advocacy roles (e.g. solicitation of funding); and monitor and evaluate the consortium mandates/goals.
NIMR representative NCDC representative FMARD representative FMEnv representative RTSL representative NHREC		

**Funders**

Tetfund World Bank UNDP Dangote Group Bill & Melinda Gates Foundation CBN AfDB Resolve to Save Lives (RTSL) Others	Dr Popoola Ayo	To fund research projects selected by the external reviewers and approved by the steering committee.
--	----------------	--

**External reviewers**

Local and foreign scientists in the 9 research thematic areas	Professor Ibrahim Abubakar (UCL)	To independently and blindly review (based on predefined selection criteria/scores), and make recommendations to the steering committee.
---	----------------------------------	--

**Steering committee**

DG of NCDC Chairman, NHRC ES NUC ES TETFund President, MAN CEO, NESG DG Nigeria Governors Forum	Dr Chikwe Ihekweazu /NHRC Chairman (Co-Chairs)	To take strategic decisions regarding the running of the consortium and funding of selected proposals (based on national priorities, feasibility and availability of funding).
---	---	--

