

# 2020

NIGERIA CENTRE FOR DISEASE CONTROL  
**ANNUAL REPORT**



ncdc.gov.ng





## 2020 Nigeria Centre for Disease Control Annual Report

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# 2020

NIGERIA CENTRE FOR DISEASE CONTROL  
**ANNUAL REPORT**



NIGERIA CENTRE FOR DISEASE CONTROL

# CONTENTS

<b>ABOUT NCDC</b>	<b>V</b>
<b>VISION AND MISSION IN MEMORY OF UCHE EMMANUEL NJOKU, WHO DIED IN ACTIVE SERVICE</b>	<b>VII</b>
<b>WELCOME MESSAGE</b>	<b>VIII</b>

## 1

<b>OFFICE OF THE DIRECTOR GENERAL</b>	<b>1</b>
1.1 WHO Mission to China	2
1.2 Strengthening Partnerships for Health Security	2
1.3. State Public Health Emergency Operations Centres (PHEOC) Optimisation	4
1.4 Commissioning of Infectious Disease Treatment (IDT) Centres	4
1.5 End-of-Year Town Hall Meeting	6
1.6 State Tours	7
1.7 Notable Events	12

## 2

<b>DEPARTMENT OF PUBLIC HEALTH LABORATORY SERVICES</b>	<b>23</b>
2.1 Enhancing National and Subnational Diagnostic Capacity for COVID-19	24
2.2 Testing for Infectious Diseases in 2020	27
2.3 COVID-19 Sequencing	28
2.4 NCDC Joins WHO/Africa CDC Regional Sequencing Network for COVID-19 and Emerging Pathogens	29
2.5 Establishment and Activation of New Molecular Laboratories for Yellow Fever	30
2.6 Establishment of Sample Collection Centres at NRL and CPHL	31
2.7 Expansion of National Testing Capacity Through Antigen-based Rapid Diagnostic Tests	31
2.8 Strategic Plans for 2021	32

## 3

<b>DEPARTMENT OF HEALTH EMERGENCY PREPAREDNESS AND RESPONSE</b>	<b>33</b>
3.1 Coordination of the National Emergency Operations Centre	34
3.2 Deployment of Rapid Response Teams	35
3.3 Establishment of Public Health Emergency Operations Centres (PHEOCs) in Seven States	36
3.4 SitAware Upgrade	37
3.5 Finalising the National Public Health Multi-Hazard Public Health Preparedness Plan (NMPHPRP)	38
3.6 Dashboard For PHEOC Status – Monitoring and Evaluation	39
3.7 Development of a National Stockpile	39
3.8 Provision and Distribution of Emergency Medical Supplies to States	40
3.9 Strategic Plans for 2021	42

# 4

<b>DEPARTMENT OF PREVENTION, PROGRAMMES AND KNOWLEDGE MANAGEMENT</b>	<b>43</b>
4.1 Strengthening Epidemic Response Systems (SERS-Plus) Project	44
4.2 Pilot of Diagnostic Stewardship Project	44
4.3 Nigeria Capacity Development on Infectious Diseases Preparedness and Response (NiCaDe)	44
4.4 Inauguration Of the AMR Coordination Committee (AMRCC)	45
4.5 Rollout of Internal Information and Communication Channels	45
4.6 2020 National Antibiotics Awareness Week	46
4.7 Establishment of a Scientific Gallery to Display NCDC Publications and Other Important Scientific Information	46
4.8 Launch of Bi-Weekly Evidence Brief	47
4.9 COVID-19: Psychosocial Support for Staff	48
4.10 First Workshop of The Orange Network (TNO)	48
4.11 Prioritising Infection Prevention and Control (IPC) on the Health Agenda	48
4.12 Nigeria COVID-19 Research Consortium	50
4.13 Strategic Plans for 2021	51

# 5

<b>DEPARTMENT OF SURVEILLANCE AND EPIDEMIOLOGY</b>	<b>52</b>
5.1 Launch of the Revised IDSR Technical Guideline (3rd Edition)	53
5.2 COVID-19 Household Seroprevalence Survey	54
5.3 Integrated Training for Surveillance Officers in Nigeria (ITSON)	59
5.4 Expansion of the Connect Centre	59
5.5 Subnational Emergency Response Capacity Building	60
5.6 Strategic Plans for 2021	61

# 6

<b>DEPARTMENT OF ADMINISTRATION AND HUMAN RESOURCES</b>	<b>62</b>
6.1 Upgrading Power Supply Systems	63
6.2 Provision of Additional Vehicles	64
6.3 Medical Check-up for Staff in The Transportation Unit	64
6.4 Recruitment of New Staff	65
6.5 Local Area Network Upgrade	65
6.6 Promotion Exercise	66
6.7 Design and Deployment of NCDC Intranet Solution (APHIDS)	66

# 7

<b>DEPARTMENT OF FINANCE AND ACCOUNTS</b>	<b>67</b>
7.1 Successful Migration to Quickbooks	68
7.2 Building Staff Capacity	68
7.3 Asset Register	68

# 8

<b>NCDC IN THE MEDIA</b>	<b>69</b>
<b>8.1. Presidential Task Force on COVID-19</b>	<b>70</b>
<b>8.2. Estimate of People Reached Through the NCDC Communications Platforms</b>	<b>71</b>
<b>8.3 Number of Media Engagements and Appearances by the Director General and other Members of Staff</b>	<b>73</b>
<b>8.4 Risk Communication</b>	<b>73</b>
<b>8.5 Take Responsibility</b>	<b>74</b>
<b>8.6 Development of COVID-19 Microsite</b>	<b>75</b>
<b>8.7 COVID-19 Nigeria Stories</b>	<b>75</b>

# 9

<b>IMPLEMENTATION OF MAJOR PROJECTS BY NCDC</b>	<b>76</b>
<b>9.1 REDISSE Project</b>	<b>77</b>
<b>9.2 Lassa Fever Epi-Study</b>	<b>81</b>
<b>9.3 Midterm-Action Review of COVID-19 Response</b>	<b>81</b>

# 10

<b>PHOTO HIGHLIGHTS</b>	<b>82</b>
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# 11

<b>STAFF PUBLICATIONS</b>	<b>90</b>
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# 12

<b>STAFF CAPACITY DEVELOPMENT IN 2020</b>	<b>100</b>
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# 13

<b>GUIDELINES DEVELOPED</b>	<b>109</b>
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# 14

<b>PARTNERS</b>	<b>113</b>
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# ABOUT NCDC

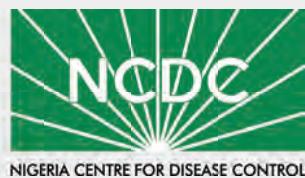
The Nigeria Centre for Disease Control (NCDC) is Nigeria's national public health institute with the mandate to protect Nigerians from the impact of communicable diseases of public health significance, amongst other responsibilities. It does this through evidence-based prevention, integrated disease surveillance and response activities, using a One Health approach, guided by research and led by a skilled workforce.

NCDC's operations and activities are guided by five key goals to:

- Accurately measure the burden of infectious diseases in Nigeria
- Ensure Nigeria is able to meet its international obligations as a member of the World Health Assembly
- Develop a Public Health laboratory service network to support the detection, prevention of, and response to critical infectious diseases
- Reduce the adverse impact of predictable and unpredicted public health emergencies
- Create an efficiently managed and evidence-based organisation with a clear focus on health promotion and disease prevention.

NCDC currently operates through six departments: Surveillance and Epidemiology, Public Health Laboratory Services, Health Emergency Preparedness and Response, Prevention Programmes and Knowledge Management, Finance & Accounts and Administration & Human Resources.

# VISION AND MISSION



## NCDC VISION

**A healthier and safer  
Nigeria through the  
prevention and control  
of diseases of public  
health importance**



## PROFILE

**The Nigeria Centre  
for Disease Control  
is the country's  
public health  
agency with  
the mandate to  
protect the health  
of Nigerians,  
from the threat  
and occurrence of  
infectious diseases**



## NCDC MISSION

**To protect the health  
of Nigerians through  
evidence-based  
prevention, integrated  
disease surveillance  
and response  
activities, using a  
one health approach,  
guided by research  
and led by a skilled  
workforce**

# **IN MEMORY OF UCHE EMMANUEL NJOKU, WHO DIED IN ACTIVE SERVICE**

In 2020, we lost our first member of staff while on active duty.

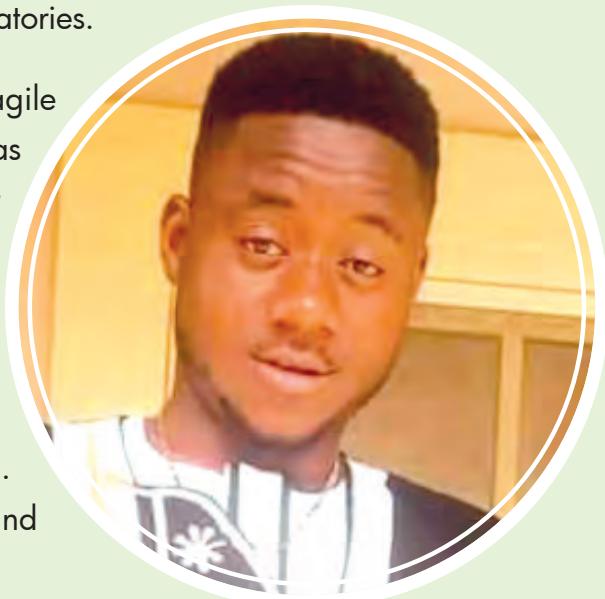
Mr. Uche Emmanuel Njoku was born on the 7th of July 1989 to Mr. and Mrs Emmanuel Njoku of Umuakuru Emekuku, Owerri North Local Government, Imo State. Uche as he was fondly called, attended Ikenegbu Primary School, Owerri from where he proceeded to Methodist High School, Ikenegbu. After obtaining his Senior Secondary School Certificate in 2007, he proceeded to the Federal College of Land Resources Technology in Owerri where he graduated with a Higher National Diploma in Surveying and Geo-information.

In 2020, in response to the COVID-19 pandemic and given the need for additional resources to serve the country, Uche began as a volunteer in the Nigeria Centre for Disease Control (NCDC). He proved to be extremely resourceful and was fully engaged by the institution, as temporary staff. He was part of the Team responsible for the management of the national laboratory supply chain coordinated by the NCDC National Reference Laboratory (NRL). Unfortunately, Uche passed away while on official duty, deploying supplies for testing to one of the public health laboratories.

Late Mr. Uche Emmanuel Njoku was an agile and hardworking young man and was admired by colleagues and friends for his strong commitment and dedication to work. He is survived by his parents, siblings and other relatives.

The entire NCDC family was shocked to hear about the news of Uche's death. We pray that his family continues to find the strength to bear this loss.

*Rest in Peace, Dear Uche.*



# WELCOME MESSAGE

**This reporting year has been unprecedented in many ways, not only for Nigeria, but the world at large. Despite being a relatively young agency, the Nigeria Centre for Disease Control (NCDC) has risen to the challenge by leading Nigeria's COVID-19 public health response. This has come with a lot of sacrifice and commitment from our staff who worked extremely hard through the year.**

Prior to the confirmation of the first case in Nigeria, NCDC established a multi-sectoral National Coronavirus Preparedness Group (NCPG) to coordinate preparedness activities for the prompt detection of COVID-19 cases. These efforts ranged from developing necessary guidelines, to establishing capacity for COVID-19 testing and case management, prepositioning medical commodities to all states, nationwide training of health workers on infection prevention control (IPC), surveillance, risk communication and other critical activities.

Leading the public health response to a pandemic with a population of over 200 million people, against a backdrop of socioeconomic complexities has proven to be challenging. Notwithstanding, one of our core priorities has been to provide recommendations that protect lives and livelihoods. I am grateful for the strong political commitment and leadership from His Excellency, President Muhammadu Buhari. This was especially important in

the coordination of Nigeria's COVID-19 response activities through the Presidential Task Force on COVID-19. The leadership of the Secretary to the Government of the Federation (SGF) has enabled a strong, coordinated, multi-sectoral response.

As an agency, we have also leveraged on the relationship built over the years with states, partners, and sister agencies, to strengthen the response at all levels. The goodwill of Nigerians including the private sector enhanced our response to the COVID-19 outbreak in Nigeria.

The COVID-19 pandemic has not stopped the occurrence of other disease outbreaks. This report details our response activities to COVID-19 and other infectious disease outbreaks in 2020. The pandemic provided an opportunity to rapidly scale up the deployment of Surveillance Outbreak and Response Analysis System (SORMAS) for digital surveillance, establishment of molecular laboratories in every state, Emergency Operations Centres among

others. We describe the activities that we undertook this year within our mandate to prevent, prepare for, detect and respond to infectious disease outbreaks and public health threats.

We could not have achieved these feats without the strong leadership of the Honourable Minister of Health, Dr Osagie Ehanire; Honourable Minister of State for Health, Dr Olorunnimbe Mamora; His Excellencies, the Executive Governors of states; Honourable Commissioners of Health; and hard work of State Epidemiologists; public health workforce and our partners. I am deeply grateful to the dedicated staff at NCDC, who continue to show exceptional commitment.

In conclusion, one of our biggest lessons this year is the importance of investment in health security. National public health institutes like NCDC require substantial, sustainable and stable investments to ensure health security. It is the only way that our country can build back better and ensure that we are better prepared for future outbreaks and pandemics.

**At NCDC, we remain committed to protecting the health of Nigerians.**



*Chikwe Ihekweazu*

**DR CHIKWE IHEKWEAZU**

Director General, Nigeria Centre for Disease Control,  
August 2021

# 1

# OFFICE OF THE DIRECTOR GENERAL

The Office of the Director General is responsible for the overall coordination of activities of the Nigeria Centre for Disease Control.

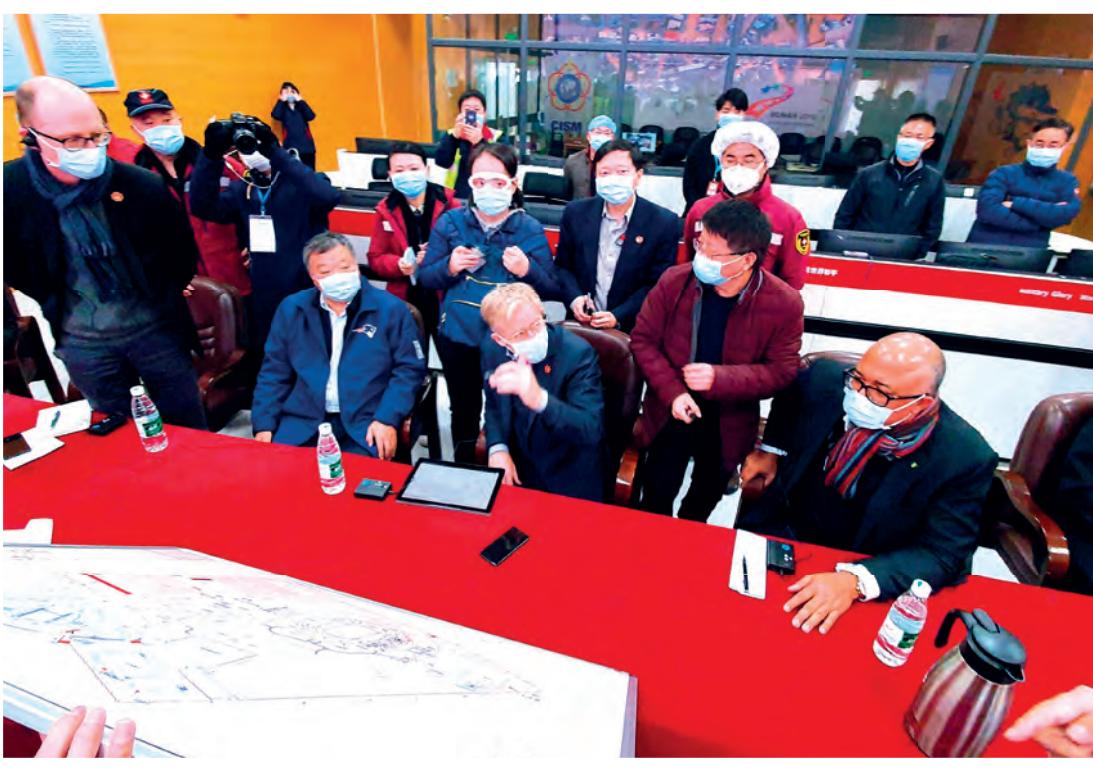
DIRECTOR GENERAL:  
**Dr. Chikwe Ihekweazu**

NUMBER OF STAFF	NUMBER OF CORPS MEMBERS IN 2020
6	3



## 1.1 WHO COVID-19 Mission of International Experts to China

In February 2020, the Director General, Dr. Chikwe Ihekweazu was part of the WHO mission to China on COVID-19. The joint mission had 13 international experts from various countries, with Dr. Ihekweazu as the only representative from the African region. This 10-day mission provided a valuable opportunity to study the effectiveness of China's response at the emergence of the COVID-19 pandemic, learn lessons for Nigeria's response and develop recommendations for the global response.



## 1.2 Strengthening Partnerships for Health Security

The NCDC has continued to develop and strengthen partnerships with local and international institutions that contribute to health security. Every year, NCDC hosts a Health Security Partners Meeting to enable the coordination and discussion of health security priorities.

## 1. OFFICE OF THE DIRECTOR GENERAL

At the Health Security Partners Meeting held in November 2020, there were more than 56 attendees from 27 partner organisations. The main discussions at the meeting included a review of Nigeria's COVID-19 response, building on investments from the COVID-19 response and plans to strengthen health security at the subnational level.



### 1.3 State Public Health Emergency Operations Centres (PHEOC) Optimisation

In 2018, NCDC began the establishment of State PHEOCs, which have been extremely valuable in the coordination of Nigeria's COVID-19 response. In 2020, the Office of the DG led the nationwide assessment of PHEOCs to identify lessons learned and existing challenges. This was followed by the development of a State PHEOC Optimisation Implementation Plan. This plan will be used to guide further development across all PHEOCs, and for the establishment of a National Network of PHEOCs.



The NCDC National PHEOC Optimisation Team in Plateau State EOC

### 1.4 Commissioning of Infectious Disease Treatment Centres

One of the major health security challenges in Nigeria is the limited availability of infectious disease treatment centres across states. In 2020, NCDC began the establishment of Infectious Disease Treatment Centres in 16 states, located

## 1. OFFICE OF THE DIRECTOR GENERAL

within Teaching Hospitals and Federal Medical Centres (FMCs). Three of these were commissioned by the Honourable Minister of Health in 2020 – Bingham University Teaching Hospital, Jos, Plateau State, Federal Medical Centre Keffi, Nasarawa State and University of Abuja Teaching Hospital, Gwagwalada, FCT. The project will continue in 2021 with the aim to improve the capacity for infectious disease management in Nigeria.



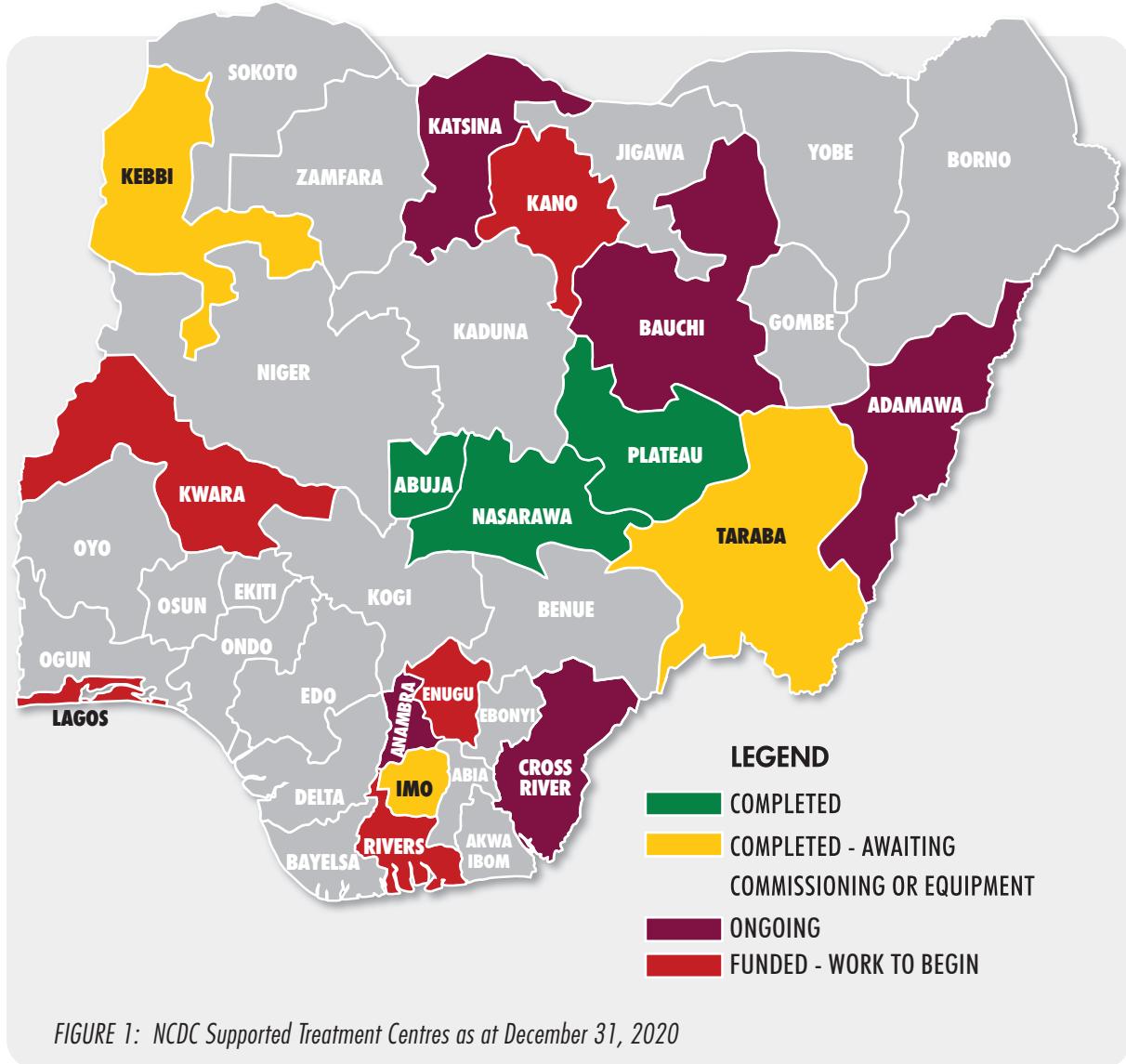
*Commissioning of Infectious Disease (ID) Care Centre at University of Abuja Teaching Hospital, Gwagwalada, FCT on 25th September 2020*



*Commissioning of ID Care Centre at Bingham University Teaching Hospital, Jos, Plateau State on 18th June 2020*



*Commissioning of ID Care Centre at Federal Medical Centre Keffi, Nasarawa State on 4th December 2020*



## 1.5 End-of-Year Town Hall Meeting

At the end of every year, NCDC holds a townhall meeting for members of staff to reflect on the activities of the year, recognise achievements and plan for the year ahead. In 2020, this was adjusted to a ‘department-based town hall meeting’ to allow for physical distancing. The townhall meeting was an opportunity for

## 1. OFFICE OF THE DIRECTOR GENERAL

interaction between NCDC staff and management, towards enabling staff delivery and contribution to the agency's mandate.



## 1.6 State Tours

At state-level, the public health response to COVID-19 is led by State Ministries of Health, coordinating activities within their Public Health Emergency Operations Centre. Most states have also established a COVID-19 Task Force for the multi-sectoral response to the outbreak at the state level.

## 1. OFFICE OF THE DIRECTOR GENERAL

The Director-General of NCDC and WHO Officer-In-Charge, Dr Fiona Braka led a delegation to visit eight states in 2020. This was to meet with Executive Governors as part of advocacy for the COVID-19 response and engage with state public health officials. The states visited were Imo, Anambra, Rivers, Delta, Katsina, Oyo, Ogun, and Lagos between 18th – 22nd April and Plateau, Edo, Akwa Ibom and Lagos between 18th – 21st June. The Nigerian Air Force provided critical support to this mission through air transportation services.



*Edo State tour: Meeting with the Executive Governor, stakeholders and health partners in the state*



*Edo State tour: Visit to the University of Benin Teaching Hospital Isolation Centre in Benin*



*Inspecting the PHEOC dashboard during the state tour in Akwa Ibom State*

## 1. OFFICE OF THE DIRECTOR GENERAL



*Edo State tour: Team review session at the end of the day's tour in Benin*



*Lagos State Tour: Inspection of a new PCR machine donated to CPHL by DFID*

## 1. OFFICE OF THE DIRECTOR GENERAL

The mission provided the opportunity for an on-the-spot assessment and review of response challenges; brainstorming on solutions to these challenges, experience sharing between the national and state level, among other activities. Importantly, the mission enabled direct engagement with Executive Governors of States early in the response.



## 1. OFFICE OF THE DIRECTOR GENERAL

The leadership at NCDC has remained engaged with every state including monthly teleconferences with State Epidemiologists and regular communication with State Commissioners for Health. The Nigerian Governors Forum has also facilitated an additional communication mechanism by inviting the DG, NCDC to its monthly meetings. This is in addition to ongoing technical support provided by the National EOC to every state.



### KEY NUMBERS

**>42**

PANEL DISCUSSIONS,  
SEMINARS AND  
WEBINARS  
PARTICIPATED IN



**11**

CONTRIBUTIONS  
TO PUBLICATIONS  
in collaboration  
with public health  
experts across the  
world

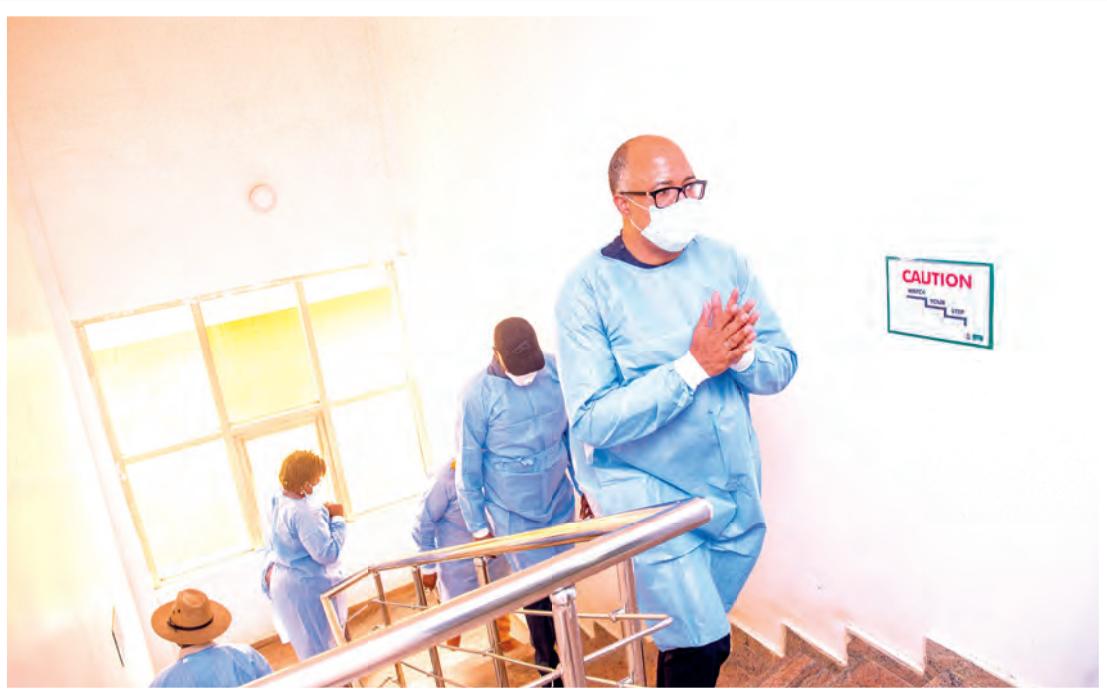


## 1.7 Notable Events

### 1.7.1 Regular briefings to President Muhammadu Buhari on COVID-19 response



**1.7.2 Visit of Secretary to the Government of the Federation,  
Boss Mustapha to NRL**



1. OFFICE OF THE DIRECTOR GENERAL

### 1.7.3 Visit of Honourable Members of the House of Representatives to NRL



#### **1.7.4 Visit of Dr. Ehanire Osagie, the Honourable Minister of Health to NRL**



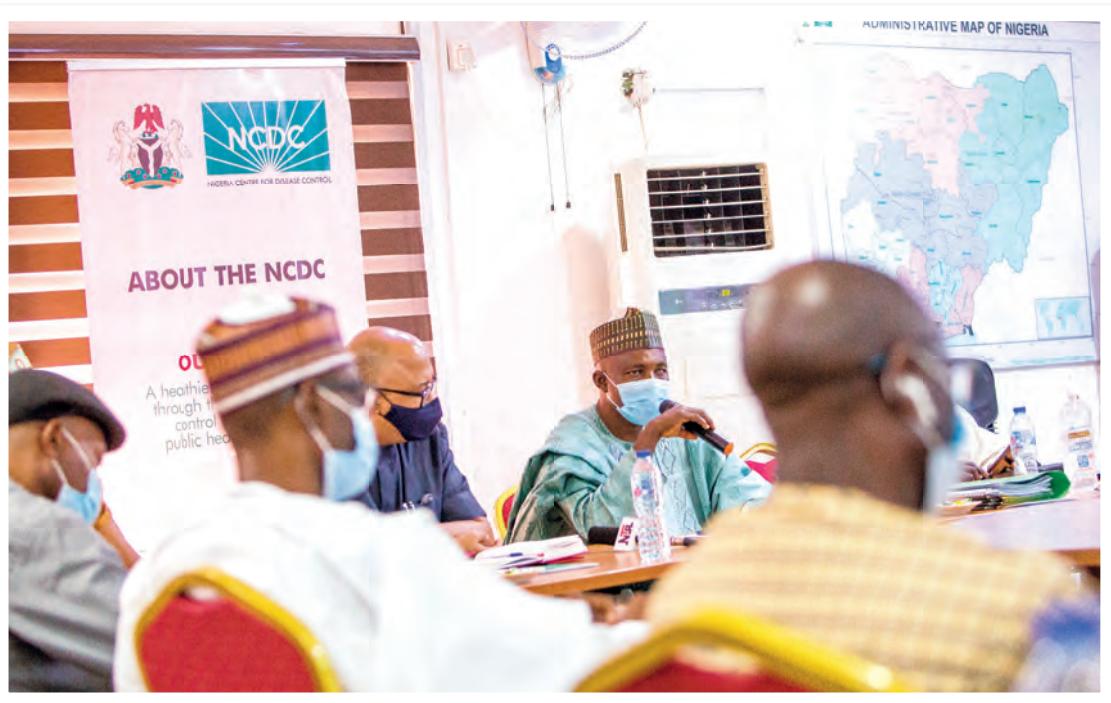
## 1. OFFICE OF THE DIRECTOR GENERAL

### 1.7.5 Public Hearings at the National Assembly on Matters of Public Health Relevance



## 1. OFFICE OF THE DIRECTOR GENERAL

### 1.7.6 Oversight visit from the House Committee on Healthcare Services



## 1. OFFICE OF THE DIRECTOR GENERAL

### 1.7.7 Visit of Brigadier General Shuaibu Ibrahim, Director General, National Youth Service Corps (NYSC)



### 1.7.8 Sample collection booth donation by the Korean International Cooperation Agency (KOICA)



### 1.7.9 Visit from Bauchi State Governor and Nasarawa State Deputy Governor



1. OFFICE OF THE DIRECTOR GENERAL

**1.7.10 Roundtable with Health Editors, Reporters and Media Owners led by the Director General**



### 1.7.11 PTF COVID-19 End-of-Year Report to Presidency



# 2

# DEPARTMENT OF PUBLIC HEALTH LABORATORY SERVICES

The Department of Public Health Laboratory Services leads and provides diagnostic services for diseases of public health importance in Nigeria through the National Reference Laboratory (NRL) and the network of public health laboratories.



HEAD OF DEPARTMENT/DIRECTOR:  
**Mrs. Nwando Mba**

NUMBER  
OF STAFF

NUMBER OF CORPS  
MEMBERS AND  
INTERNS IN 2020

78 10



## 2.1 Enhancing National and Subnational Diagnostic Capacity for COVID-19

At the beginning of the pandemic in January 2020, only four laboratories had the capacity to test for COVID-19. The NCDC through the National Reference Laboratory (NRL) led the establishment of molecular laboratories for COVID-19 across the country. In February, as part of preparedness efforts, three laboratories for COVID-19 testing were activated including the NRL; Lagos University Teaching Hospital (LUTH); and the Nigerian Institute of Medical Research (NIMR), forming the NCDC network of laboratories for COVID-19 testing. Following the confirmation of the index case of COVID-19 in Nigeria on 27th February 2020, two additional laboratories were added to the network in March - Irrua State Teaching Hospital (ISTH) and the African Centre of Excellence for the Genomics of Infectious (ACEGID).

By September 2020, NCDC had activated a total of 97 (79 public health laboratories and 18 private laboratories) laboratories for the testing of COVID-19 with at least one in every state. Private laboratories were engaged to enhance the national testing capacity in line with the national testing strategy.

### KEY NUMBERS

**3**

**LABORATORIES ACTIVATED FOR COVID-19 TESTING AS PART OF PREPAREDNESS EFFORTS IN FEBRUARY 2020.**

Two more were activated following the confirmation of the index case of COVID-19



**97**

**LABORATORIES ACTIVATED FOR COVID-19 TESTING AS AT SEPTEMBER 2020 – 79 PUBLIC LABS & 18 PRIVATE LABS**



## 2. DEPARTMENT OF PUBLIC HEALTH LABORATORY SERVICES

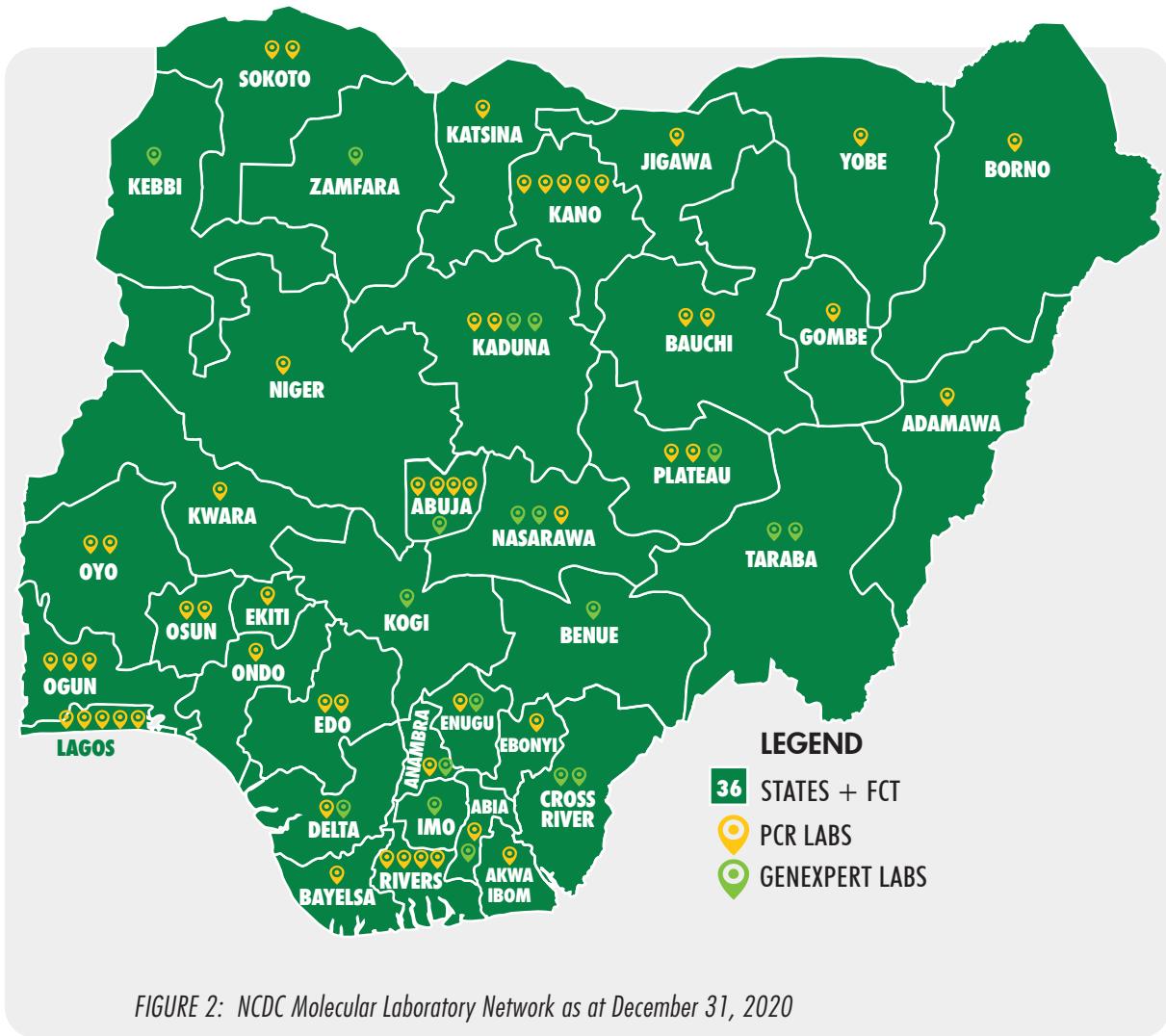


FIGURE 2: NCDC Molecular Laboratory Network as at December 31, 2020

The NRL has continued to coordinate testing across the country and ensure the steady and substantial supply of equipment, reagents and consumables to laboratories within the COVID-19 laboratory network.

The total number of reagents supplied to the network of laboratories under the NRL in 2020 is illustrated in Figure 3.

2. DEPARTMENT OF PUBLIC HEALTH LABORATORY SERVICES

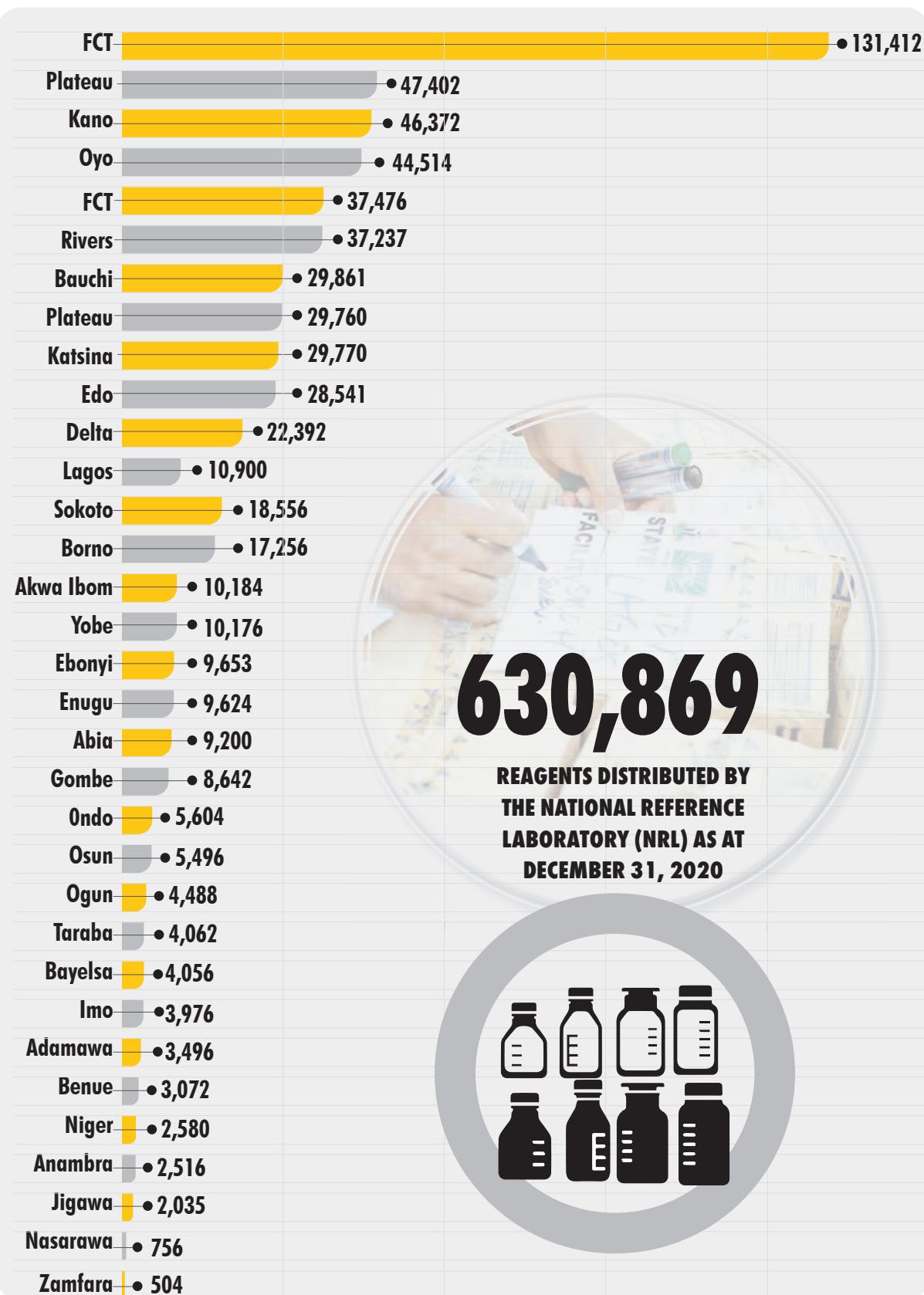


FIGURE 3: NRL Distribution of Reagents as at December 31, 2020

## 2.2 Testing for Infectious Diseases in 2020

In both campuses, the Department tested a total of 169,741 samples across various disease areas with SARS-CoV-2 being the highest as illustrated in Figure 4

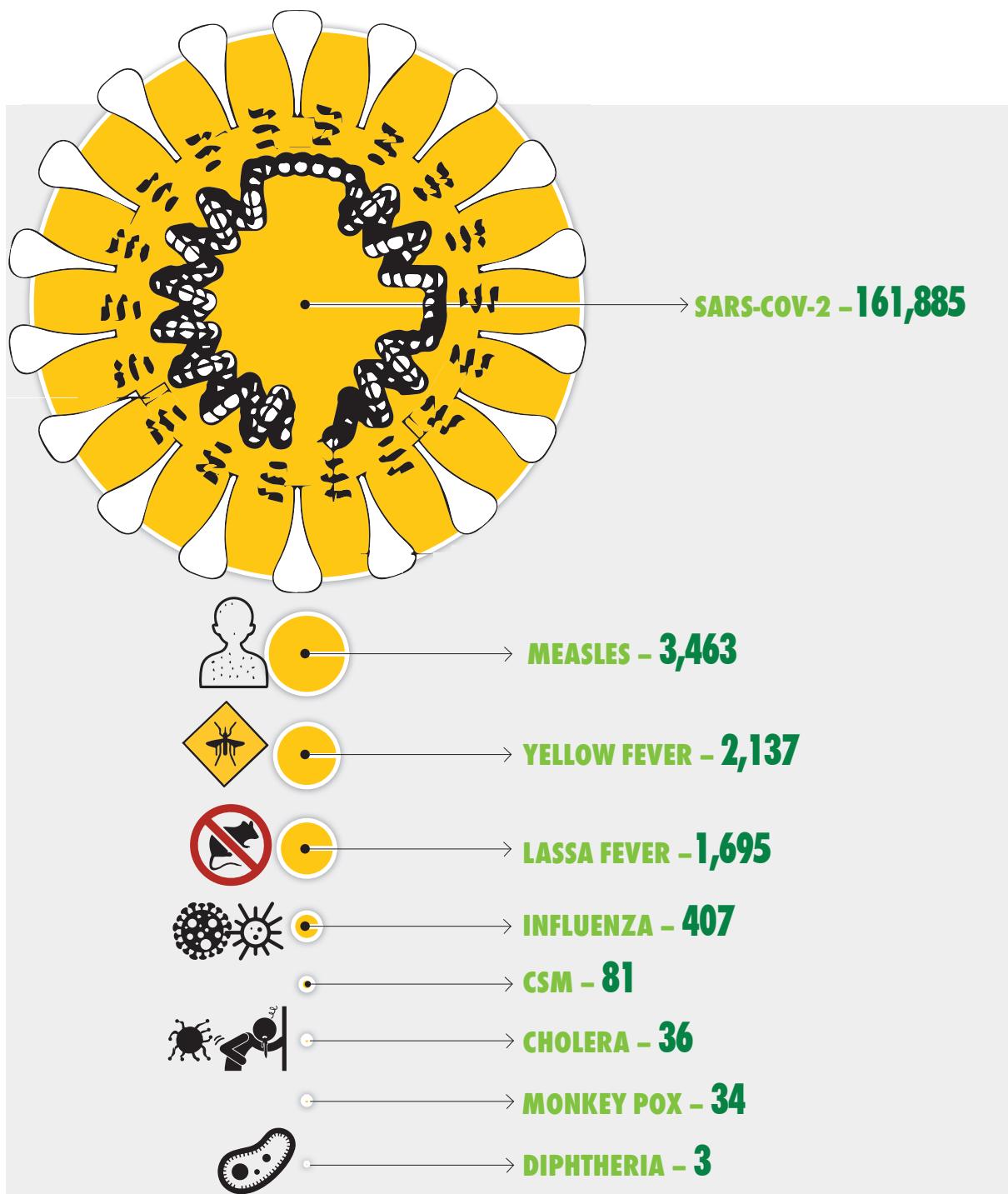


FIGURE 4: Samples tested at NRL Gaduwa, Abuja and CPHL, Lagos

On the 8th of July 2020, the NRL detected three cases of diphtheria. This was the first confirmation of diphtheria in any laboratory in Nigeria following the activation of diphtheria diagnosis capacity supported by Public Health England. In addition to the testing capacity at NRL, three sentinel sites – LUTH, University of Maiduguri Teaching Hospital (UMTH) and General Hospital Katsina were trained to carry out preliminary tests for Diphtheria.



NCDC Medical Lab Scientist collecting COVID-19 samples, via a nasal swab, from a returning traveller

### 2.3 COVID-19 Sequencing

The NRL Research Team, in collaboration with NIMR and ACEGID sequenced the sample from the COVID-19 index case by metagenomics sequencing. This was the first sequencing of the severe acute respiratory virus (SARS-CoV-2) from an African country. The NCDC has continued to work with ACEGID and other institutions to carry out sequencing of the virus. Through this, multiple lineages of the virus have been identified in Nigeria and are shown in figure 5.

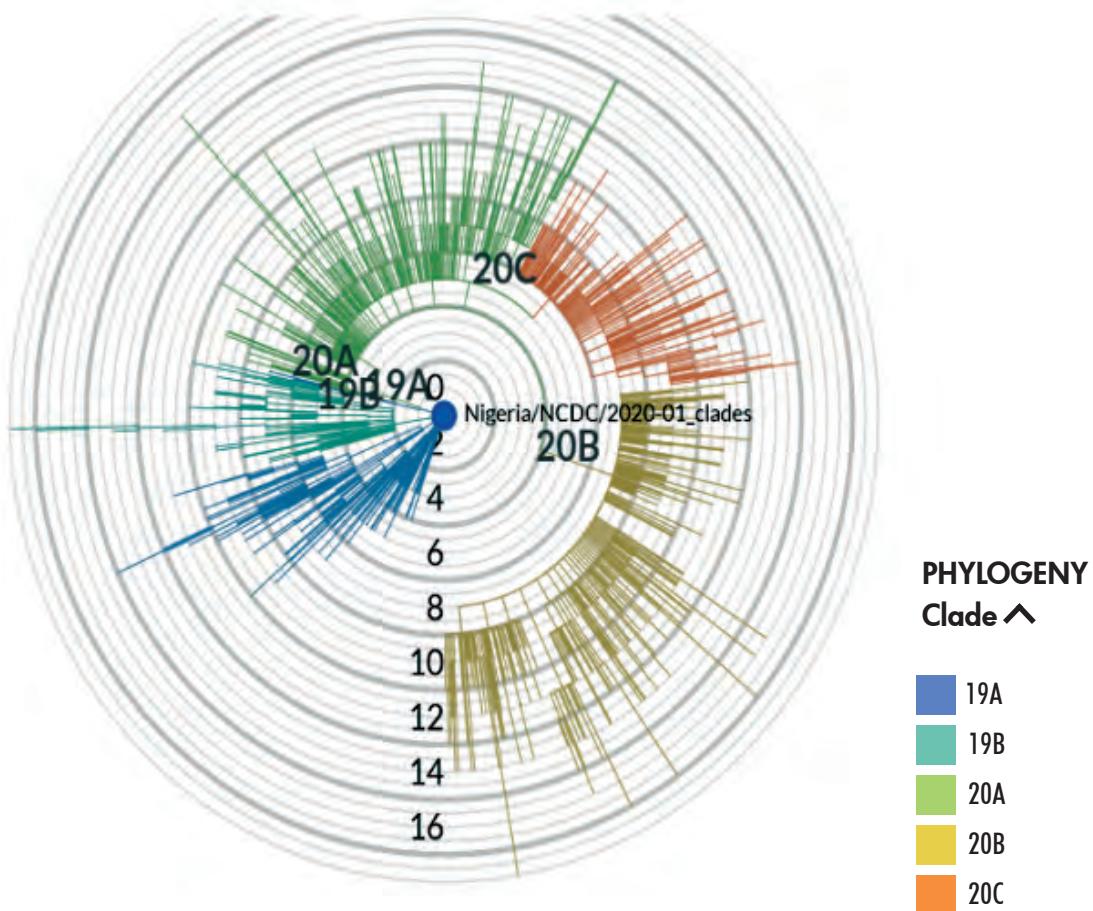
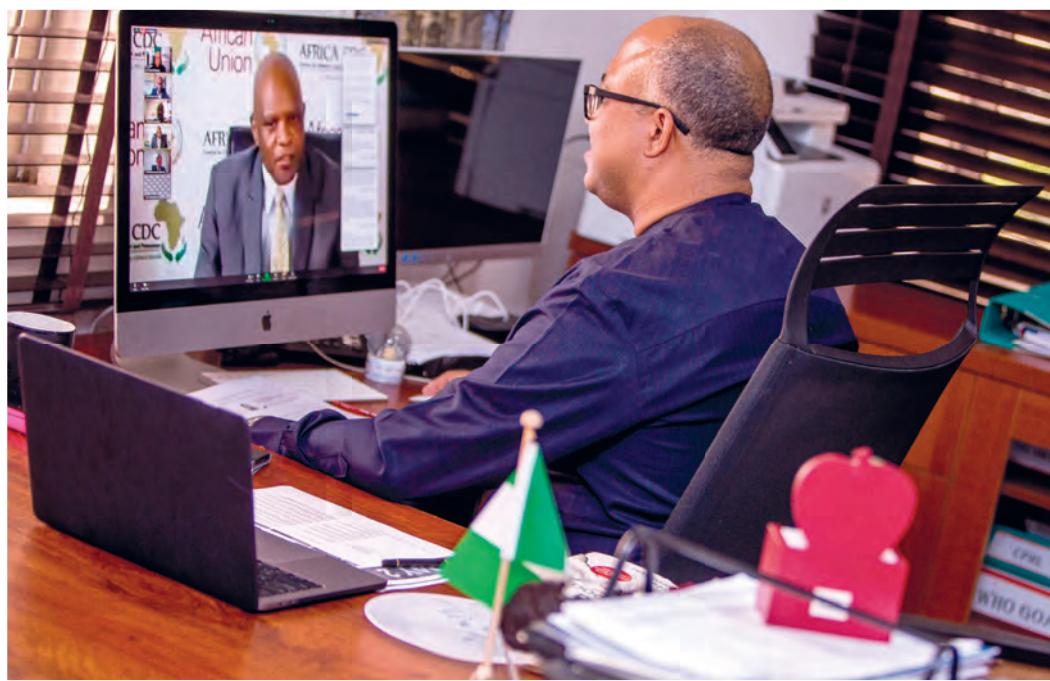


FIGURE 5: A Nextclade Global tree, showing clade assignment of a sequenced sample at NRL.  
Blue dot on the tree shows that the sample highlighted was of clade 19A

## 2.4 NCDC Joins WHO/Africa CDC Regional Sequencing Network for COVID-19 and Emerging Pathogens

The NCDC NRL and its collaborating lab, ACEGID, were selected as part of eight laboratories within the Regional Sequencing Network for COVID-19 and other emerging pathogens established by World Health Organization Regional Office for Africa (WHO-AFRO) and the Africa Centres for Disease Control and Prevention (Africa CDC). In this role, NRL will support the sequencing of

COVID-19 samples in the African region for the implementation of adequate control measures, and subsequently for other diseases.



*Regional press briefing on COVID-19 hosted by the Africa Centres for Disease Control and Prevention*

## **2.5 Establishment and Activation of New Molecular Laboratories for Yellow Fever**

In January 2020, NCDC announced the inclusion of three new laboratories into the national yellow fever/measles/rubella laboratory network - University of Benin Teaching Hospital, Edo; University of Nigeria Teaching Hospital, Enugu; and the NRL, Abuja. Additionally, laboratories were established in every state for COVID-19 molecular testing.

Over the last one year, NCDC has continued to support the building, renovation and capacity advancement of public health laboratories for priority pathogens across the country

## 2.6 Establishment of Sample Collection Centres at NRL and CPHL

To ramp up and increase public access to COVID-19 testing, sample collection centres were set-up at the NRL and Central Public Health Laboratory (CPHL). This was implemented through the donation of three walk-through booths from the Korean International Cooperation Agency (KOICA) to Nigeria through the agency. This effort strengthened the response to the COVID-19 outbreak with over 2,800 samples collected in these booths between October-December 2020.



## 2.7 Expansion of National Testing Capacity through Antigen-based Rapid Diagnostic Tests

As part of efforts to safely reopen NYSC camps, NCDC deployed the use of WHO approved Rapid Diagnostic Tests for diagnosis of SARS-CoV-2 (SD Biosensor and Abbott PanBio). This provided a unique opportunity to pilot the use of COVID-19 Ag-RDTs in Nigeria and develop data for its validation. For stream one, a total of 35,184 RDT screening was conducted in 37 camps across Nigeria which included corps members, camp officials, visitors, and vendors. Of those tested, 143 were RDT Positives (108 were corps members).



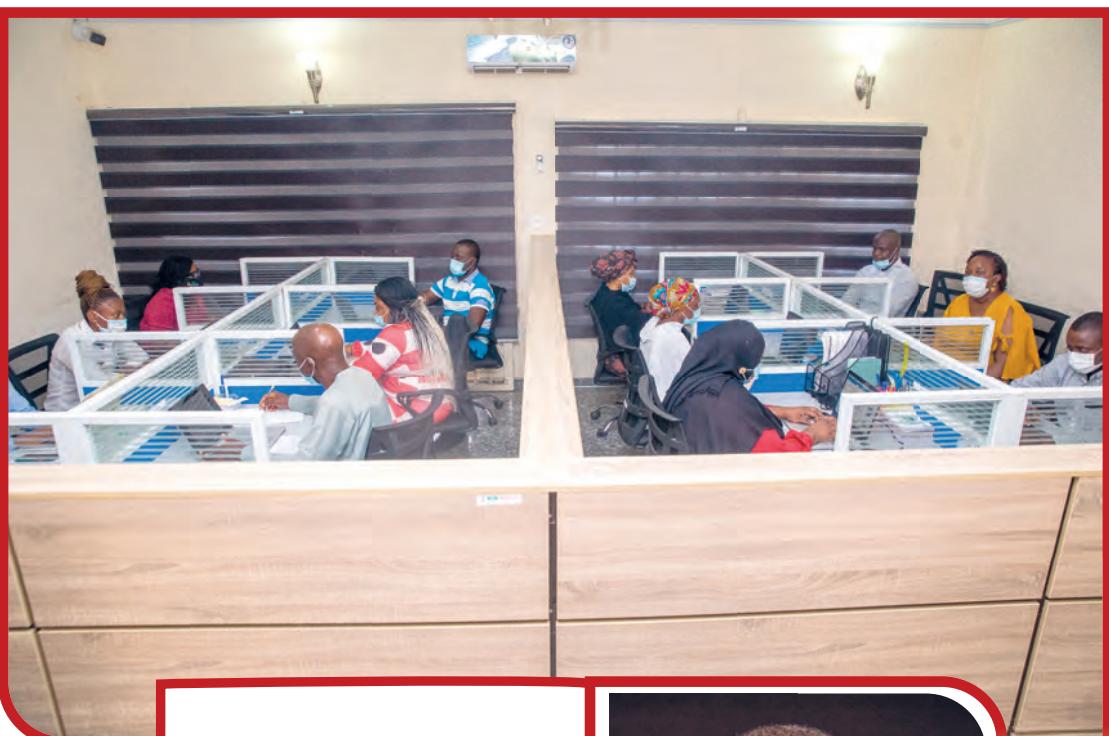
## 2.8 Strategic Plans for 2021

- Enhance, improve and sustain quality diagnostic services for priority diseases in NCDC laboratories and its networks
- Establish effective linkages between NCDC laboratories and other public health laboratories (veterinary, environment, food & safety) using a One Health approach to support local and regional public health surveillance and response
- Provide appropriate infrastructure and equipment to sustain essential public health laboratory services at the NCDC National Reference Laboratories
- Support infrastructure upgrade and equipment availability and maintenance of the NCDC laboratories
- Improve biosafety, biosecurity and specimen management for the NCDC laboratories and its networks
- Establish innovative technology in the diagnosis of emerging infectious diseases of public health importance and research
- Institutionalise laboratory quality management system in NCDC laboratories and its network

# 3

# DEPARTMENT OF HEALTH EMERGENCY PREPAREDNESS AND RESPONSE

The Department of Health Emergency Preparedness and Response is responsible for the mitigation of disasters, health emergencies and management of its impact. The directorate builds capacity, advocates and sensitises on emergency preparedness and response.



HEAD OF DEPARTMENT/DIRECTOR:

**Dr. John Oladejo**

NUMBER  
OF STAFF

41

NUMBER OF CORPS  
MEMBERS AND  
INTERNS IN 2020

2

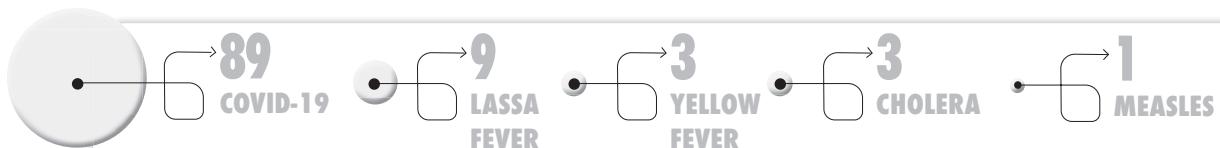


### 3.1 Coordination of the National Emergency Operations Centre

Following the initial alert from WHO on the COVID-19 outbreak in Nigeria, the Federal Ministry of Health through NCDC established a multi-sectoral National Coronavirus Preparedness Group (NCPG). This group led by the HEPR Department, carried out daily epidemic intelligence gathering. Following the confirmation of Nigeria's first COVID-19 case on February 27, 2020, the NCPG transitioned into the National Emergency Operations Centre (EOC) at level 3, the highest for a public health emergency. The department leads the Coordination Pillar of the National EOC and oversees the tracking and implementation of COVID-19 response activities.



One of over 1,525 national COVID-19 EOC meetings, which held on a daily, then transitioned to bi-weekly basis



## 3.2 Deployment of Rapid Response Teams

The department coordinates and supervises the deployment of multi-disciplinary Rapid Response Teams (RRTs) to all states and the FCT to support and strengthen the subnational response to disease outbreaks. In 2020, a total of 105 teams were deployed across all states for response activities to different public health emergencies disaggregated thus; COVID-19 (89), Lassa Fever (9), Yellow Fever (3), Cholera (3) and Measles (1).



### 3.3 Establishment of Public Health Emergency Operations Centres (PHEOCs) in Seven States

The Emergency Operations Division of the Department manages the National Incident Coordination Centre (ICC), which doubles as the National EOC, as well as lead the establishment, and operationalisation of PHEOCs.

In 2020, seven PHEOCs were established in Lagos, Imo, Oyo, Ekiti, Akwa Ibom, Adamawa, and Taraba States with over 175 State frontline responders trained and mentored for the effective coordination of disease outbreaks. To date, NCDC has supported 28 states to establish PHEOCs. The support from NCDC includes the provision of technical assistance, training, and mentoring of staff at the PHEOC, and general systems strengthening.

KEY NUMBERS

**175**  
STATE FRONTLINE  
RESPONDERS TRAINED  
AND MENTORED  
for the effective  
coordination of  
disease outbreaks



**7**  
PHEOCs ESTABLISHED  
in Lagos, Imo, Oyo,  
Ekiti, Akwa Ibom,  
Adamawa and Taraba  
States





STATE PHEOC  
ASSESSMENT:  
Workshop for Dissemination of  
Findings and Development of  
State PHEOC Optimisation  
Implementation Plan  
November 17-18  
COVID19.NCDC.GOV.NG



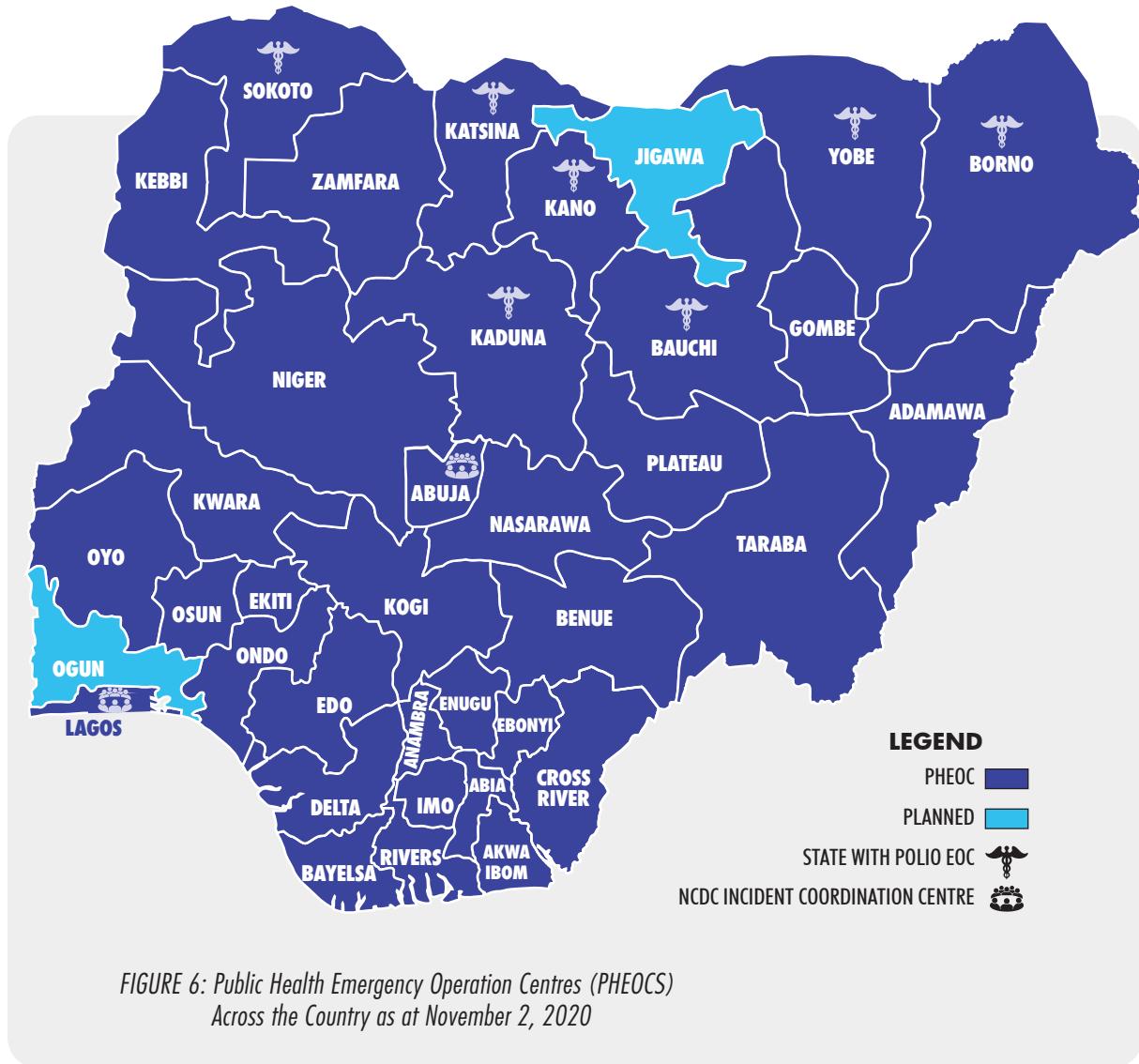
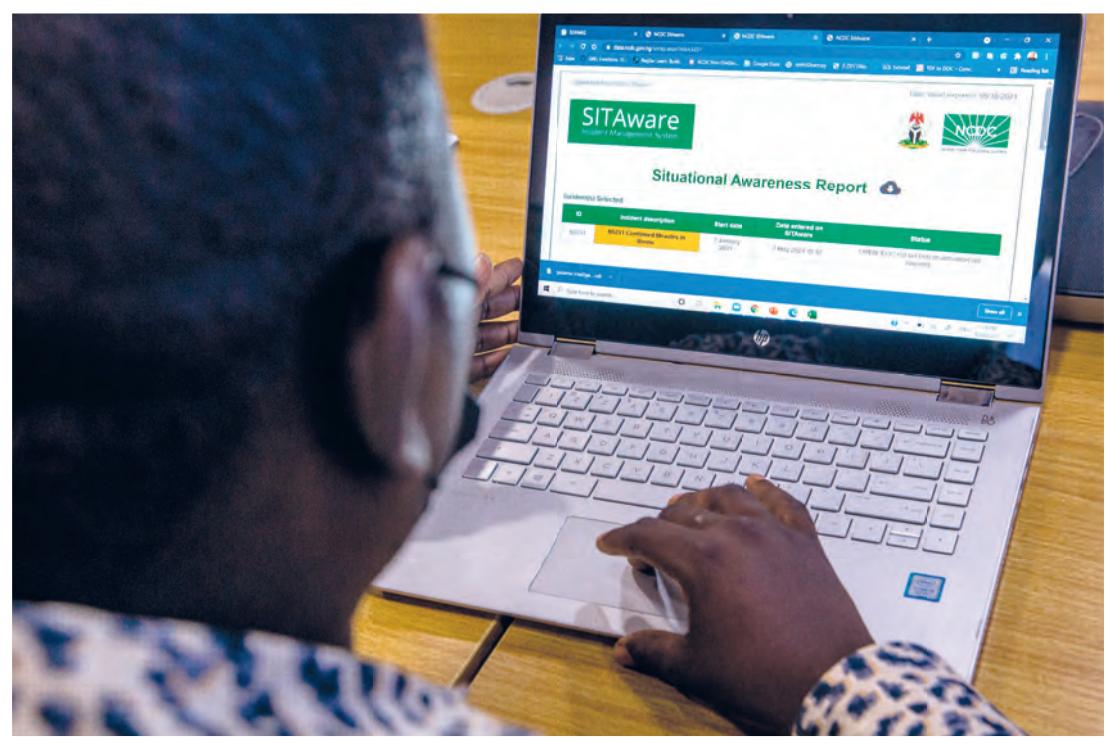


FIGURE 6: *Public Health Emergency Operation Centres (PHEOCs) Across the Country as at November 2, 2020*

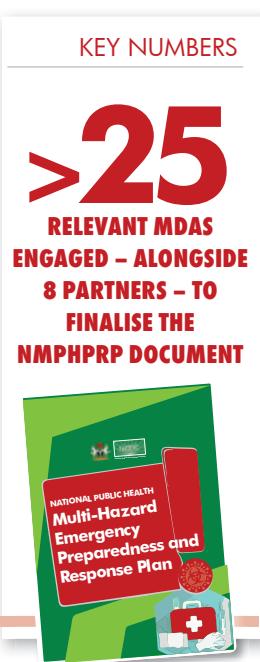
### 3.4 SITAware Upgrade

SITAware, the public health event management information system used at the EOCs was upgraded with up-to-date information on COVID-19 signals and events reported in Nigeria. The Department continues to work with all disease Technical Working Groups (TWGs) to ensure the upload of adequate and relevant information on the platform. This enables the Coordination Pillar of the National EOC to monitor response timelines and serves as an important resource for After Action Reviews.



NCDC Staff visualising the SITAware dashboard to monitor trends of incidence in the country

### 3.5 Finalising the National Public Health Multi-hazard Public Health Preparedness Plan (NMPHPPR)



During Nigeria's first and midterm Joint External Evaluation of International Health Regulations (IHR) capacity conducted in 2017 and 2019 respectively, the need for a national multi-hazard public health preparedness and response plan was proposed. In 2019, NCDC in collaboration with WHO engaged over 25 relevant MDAs and eight partners to develop a zero draft of the document, adapting the WHO AFRO template for public health preparedness plan.

The NMPHPPR was finalised in 2020 and provides a high level, unifying multi-sectoral, strategic framework for public health emergency preparedness and response for infectious and non-infectious hazards in Nigeria.



*Development of the National Public Health Multi-Hazard Emergency Preparedness and Response Plan*

### **3.6 Dashboard for PHEOC Status – Monitoring and Evaluation**

A web-based questionnaire for data collection and visualisation of output was developed by the Department. This is for baseline assessments to ascertain the needs of new and existing PHEOCs as well as to identify gaps and areas of improvement. Twenty-eight PHEOCs were assessed using this tool, and the results were used to inform decision making towards the strengthening of State PHEOCs.

### **3.7 Development of a National Stockpile**

The national stockpile, which is held in strategic locations across Nigeria, is a strategic reserve of supplies including drugs, reagents, equipment, vaccines, antidotes, personal protective equipment (PPE) to and others. Through direct procurements and support from partners, NCDC built a national strategic

stockpile for the COVID-19 pandemic. This enabled the agency to meet the high demands for medical/laboratory supplies and equipment from states for COVID-19 and other diseases throughout the year. The establishment of the national stockpile helped to prevent the stock-out of critical supplies especially at the peak of the pandemic.

The Department developed guidelines and Standard Operating Procedures (SOPs) for the management of these supplies. Additionally, a Logistics Management Information System (LoMIS) was developed with support from eHealth Africa. This has improved the accuracy, quality of data and visibility of stockpile, at all levels of the supply chain.

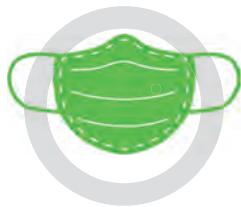


### **3.8 Provision and Distribution of Emergency Medical Supplies to States**

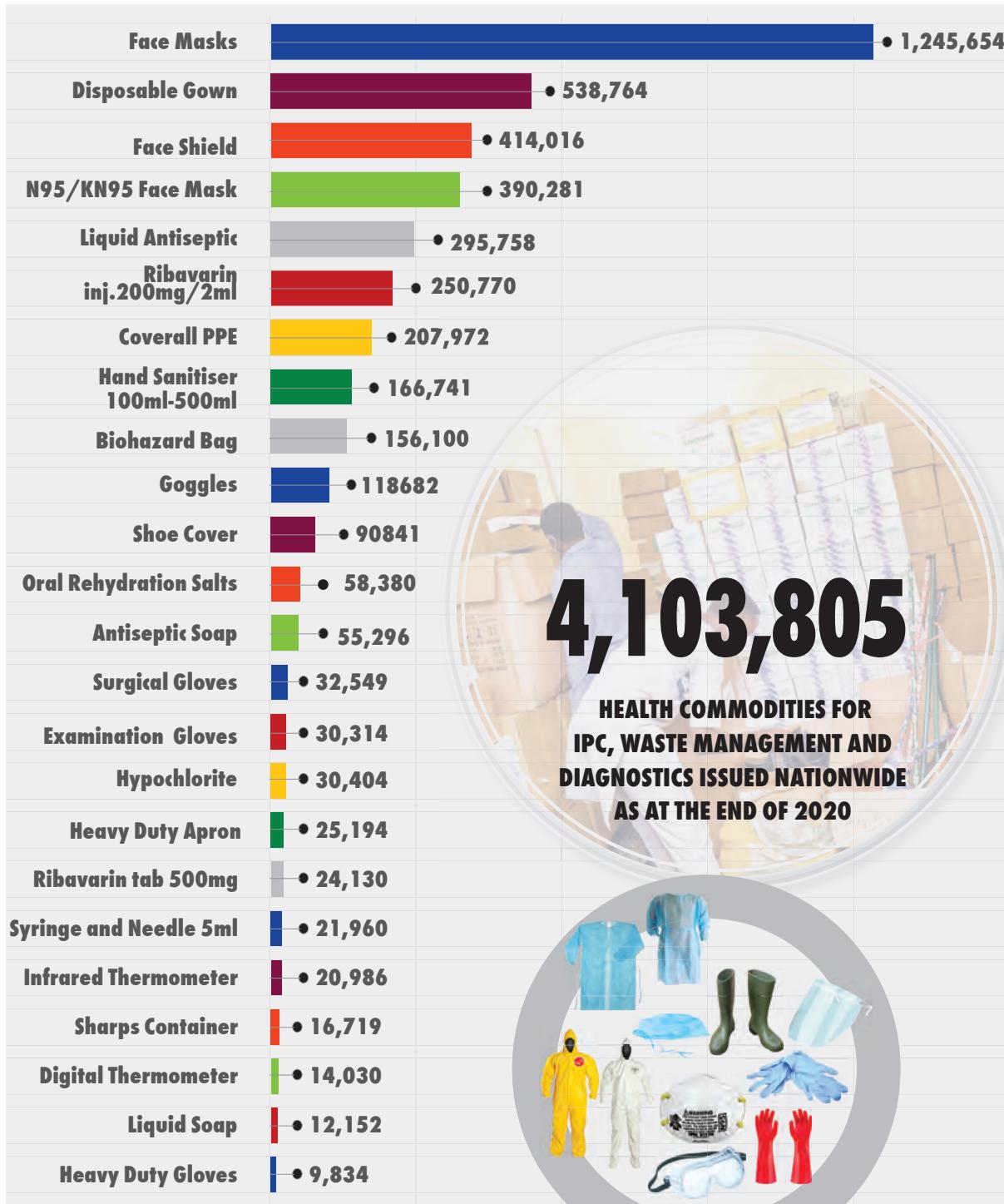
Despite initial challenges with accessing the global supply chain for medical and laboratory supplies due to shortages, NCDC prepositioned medical supplies such as PPE to all states and continued monthly deployments as part of the COVID-19 response in Nigeria. Similarly, the agency provided supplies to states with concurrent outbreaks of other diseases. Using the LoMIS tool, NCDC maintained an adequate inventory of the national stockpile of commodities and deployment as shown below.



**538,764**  
DISPOSABLE GOWNS  
DISTRIBUTED ACROSS THE STATES  
AND FCT AS AT THE END 2020



**1,245,654**  
FACE MASKS DISTRIBUTED  
ACROSS THE STATES AND  
FCT AS AT THE END 2020

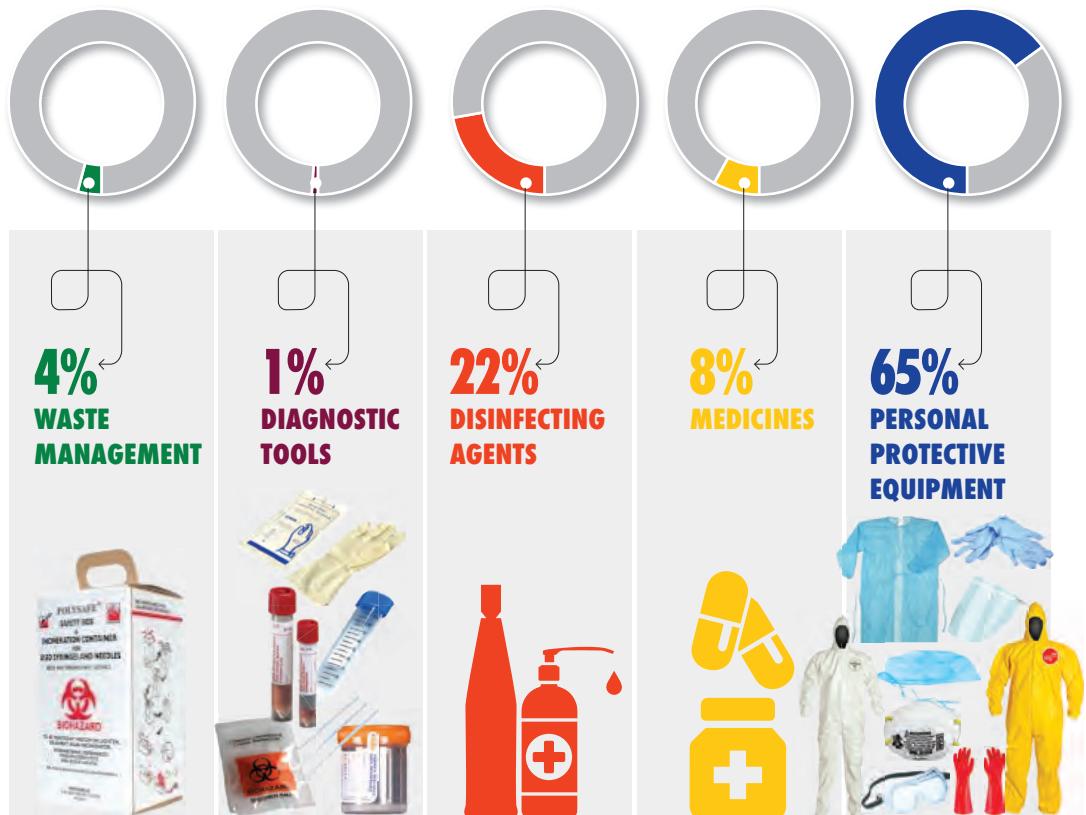


**4,103,805**

HEALTH COMMODITIES FOR  
IPC, WASTE MANAGEMENT AND  
DIAGNOSTICS ISSUED NATIONWIDE  
AS AT THE END OF 2020



FIGURE 7: Most Issued Commodities in 2020



*FIGURE 8: Categories of Total Commodities Issued in 2020*

### 3.9 Strategic Plans for 2021

- Complete the State PHEOC Roll out in Taraba, Ogun and Jigawa States
- Full implementation of SITAware in NCDC and at State PHEOCs
- Commence retraining and supportive supervisory visit to established State PHEOCs
- Conduct Incident Manager refresher training to TWG leads and all senior officers
- Develop a National EOC Network
- Upgrade the national and state PHEOCs based on the recommendation of the recently concluded assessment

# 4 DEPARTMENT OF PREVENTION, PROGRAMMES AND KNOWLEDGE MANAGEMENT

The Department of Prevention, Programmes and Knowledge Management develops health promotion and disease prevention plans addressing priority endemic infectious diseases and non-communicable disease in Nigeria.



HEAD OF DEPARTMENT/DIRECTOR:  
**Dr Chinwe Ochu**

NUMBER  
OF STAFF

42

NUMBER OF CORPS  
MEMBERS AND  
INTERNS IN 2020

1



## **4.1 Strengthening Epidemic Response Systems (SERS-PLUS) Project**

The implementation of the SERS-Plus Project led to the development and operationalisation of an electronic sample tracking system (sTrac) and the procurement and setup of six-teleconference equipment for use at the agency. This has contributed to the improvement of the national sample transportation system as well as collaboration with states and other national and regional public health institutes.

## **4.2 Pilot of Diagnostic Stewardship Project**

As part of the Antimicrobial Resistance (AMR) subproject of the Nigeria Capacity Development for Preparedness and Response for Infectious Diseases (NiCaDe) project, the Department commenced the pilot of the AMR diagnostic stewardship to guide therapeutic decision-making and inform treatment recommendations as well as AMR control strategies in health facilities. Pre-testing of the data collection tools were conducted, a training manual on data collection developed and research assistants recruited and trained on data collection.

With support from WHO, Nigeria conducted a National Antibiotic Point Prevalence Survey aimed at collecting antibiotic prescription data from 12 secondary and tertiary hospitals to determine the prevalence of antimicrobial use at these facilities.

## **4.3 Nigeria Capacity Development on Infectious Diseases Preparedness and Response (NiCaDe)**

A total of about 82 hours of virtual meetings and 26 hours of webinar sessions were held to facilitate online refresher webinar series on the rational use of PPE, empathic communication in healthcare settings for state NiCaDe-IPC PALS (Participatory Approach to Learning in Systems) trainers. This was in addition to the training workflow materials developed for capacity building in states with an upsurge of COVID-19 cases and increased healthcare workers infection.

## 4.4 Inauguration of the AMR Coordination Committee (AMRCC)

A two-day inaugural meeting of the AMR Coordinating Committee (AMRCC) was organised in collaboration with the Federal Ministries of Health, Agriculture and Rural Development and Environment, supported by the World Health Organization (WHO) and Fleming Fund country grant consortium. This provided the coordination mechanism across the three Ministries and strategic guidance for AMR response activities in Nigeria.

The maiden edition of the AMR newsletter was also published to highlight ongoing national response activities and other related events across the world.



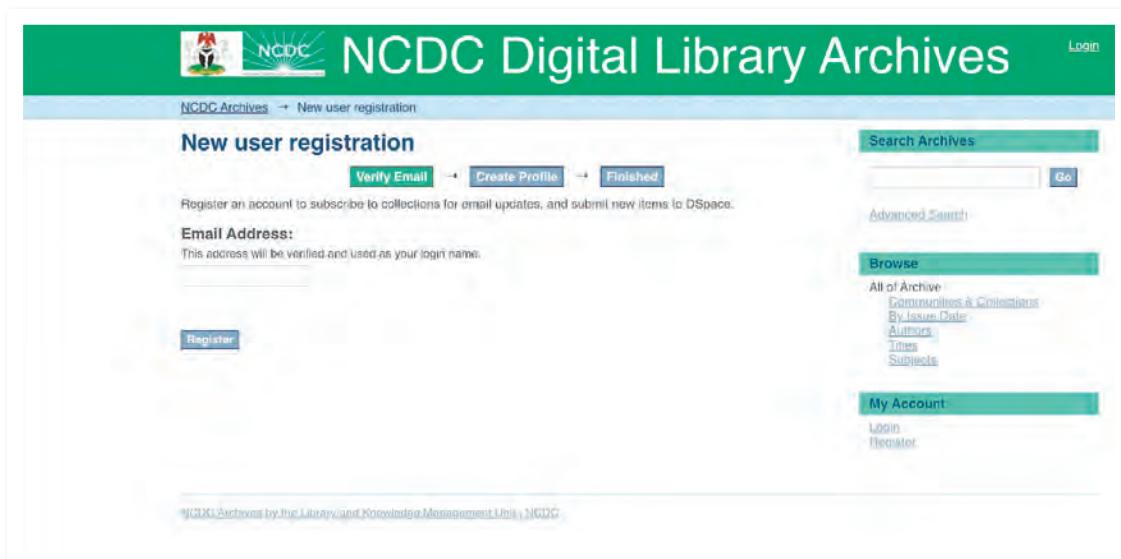
The screenshot shows the header of the 'ANTIMICROBIAL RESISTANCE NEWSLETTER'. It features logos for NCDC, Federal Ministry of Health, and FMARD. Below the header, it says 'A bi-weekly update by the National Antimicrobial Resistance Secretariat'. On the left, a green sidebar lists 'In this Issue' with links to 'Featured Events (pg.1)', 'Events (pg.2)', 'Publications (pg.3)', 'Webinars (pg.5)', 'Mentorship (pg.7)', and 'Learn more (pg.7)'. The main content area has a section titled 'FEATURED EVENTS' with a link to 'Human and Animal Health Sectors' Technical Working Group Meetings: October 2020'. To the right of this text is a photograph of a group of people in a conference setting, and to the far right is a vertical sidebar with various icons.

## 4.5 Rollout of Internal Information and Communication Channels

Supported by the International Association of National Public Health Institutes (IANPHI), the Department rolled-out the Integrated Library Management System

#### 4. DEPARTMENT OF PREVENTION, PROGRAMMES AND KNOWLEDGE MANAGEMENT

(ILMS) and Electronic Archives Management System (EAMS) to improve and strengthen all information and communication channels within NCDC and preserve its institutional merits for future reference.



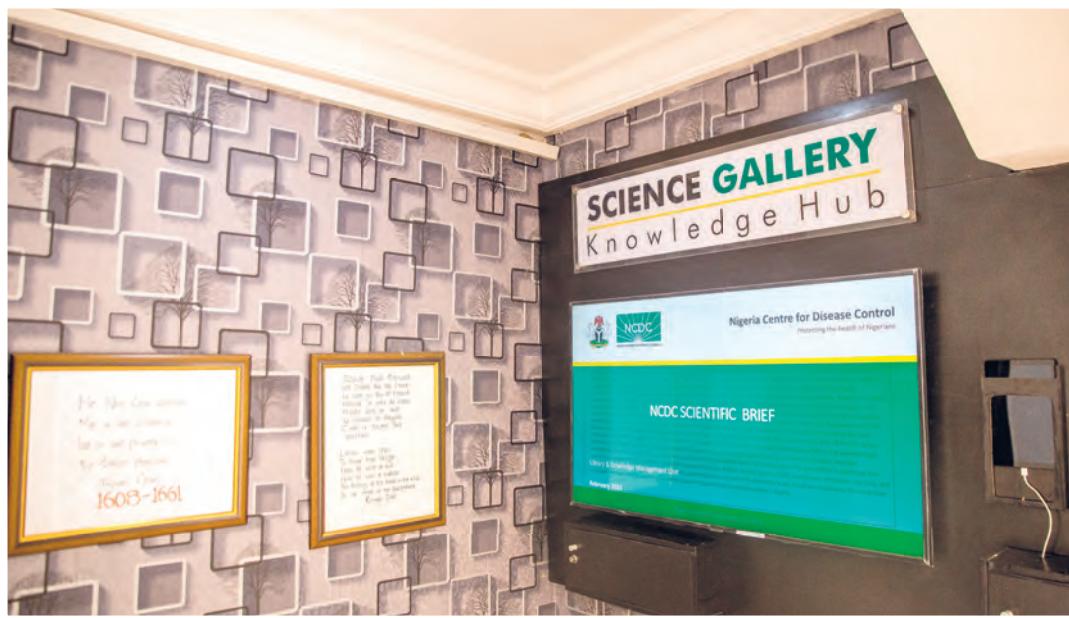
## 4.6 2020 National Antibiotics Awareness Week

The World Antibiotics Awareness Week held from 18-24 November 2020 in collaboration with the Federal Ministry of Agriculture and Environment. The event was to increase awareness on the threat of antibiotics resistance, promote best practices among key audiences such as farmers, students, caregivers, patent drug dealers, health workers and policymakers.

## 4.7 Establishment of a Scientific Gallery to Display NCDC Publications and other Important Scientific Information

A core function of NCDC is to conduct, collate, synthesise and disseminate public health research to inform health policy in the country. The Science Gallery delivers a unique exhibition of abstracts and authors of scientific writings published in peer-reviewed journals by NCDC staff. This promotes scientific reading, writing

and communication in the organisation and showcases the agency's scientific outputs.



## 4.8 Launch of Bi-weekly Evidence Brief

In July 2020, the Knowledge Management Unit commenced the publication of internal bi-weekly scientific briefs to share evolving scientific evidence on COVID-19 from across the world.

## 4.8 COVID-19: Psychosocial Support for Staff

The Department initiated a survey on 'Experience of Outbreak among NCDC Staff and Reflections Moving Forward'. This workplace-based survey gathered information from staff infected with COVID-19 which helped NCDC Management and other stakeholders to provide better support and protection to staff infected with COVID-19 or other infectious diseases.

## 4.9 First Workshop of the Orange Network (TNO)

The Infection Prevention and Control (IPC) Unit conducted workshops for IPC focal persons nominated from each of the 33 tertiary health centres that form the Turn Nigeria Orange Network (TNO). The workshops focused on the WHO core components for setting up an IPC program, hand hygiene auditing and multi-modal strategies. This is to improve hand hygiene and healthcare-associated infection surveillance of surgical site infections.

## 4.10 Prioritising Infection Prevention and Control (IPC) on the Health Agenda

At the onset of the COVID-19 outbreak, the first-ever IPC training of trainers (ToT) for participants from African countries was conducted in Nigeria led by NCDC in collaboration with Africa CDC.



NCDC-ACDC IPC Training of Trainers for Africa

As part of efforts to reduce the risk of transmission of COVID-19 and other infectious diseases amongst health care workers in Nigeria, an online course on IPC in the context of COVID-19 was launched and various offline training materials were developed and used by field trainers in building capacity across the country. The IPC Unit also developed and deployed an assessment checklist for on-ground facility readiness assessment of health facilities and provided technical guidance and safety protocols towards the safe reopening of religious houses, schools, NYSC orientation camps, and other relevant institutions across the country.

Over 6,000 participants across the country took the IPC online course and gained certificates of course completion. Thirty-nine thousand (39,000) health workers were physically trained by the IPC team and focal persons under its network.



IPC training of focal persons from Health facilities under the Uniformed Services Network

**>6000**

**PARTICIPANTS TOOK THE ONLINE COURSE ON IPC IN THE CONTEXT  
OF COVID-19 AND GAINED CERTIFICATES OF COURSE COMPLETION**



IPC Assessment of an NYSC Camp

#### 4.11 Nigeria COVID-19 Research Consortium



The Department initiated the convening of the largest research consortium in the country, in response to the COVID-19 outbreak. The Nigeria COVID-19 Research Consortium (NCRC) formed in collaboration with the Federal Ministry of Health, Tertiary Education Trust Fund (TETFUND), National University Commission (NUC), Manufacturers Association of Nigeria (MAN) and National Economic Summit Group (NESG), brought together academics and scientists, to promote high-quality scientific research on identified national priorities in line with the WHO research roadmap for COVID-19. The NCRC led the implementation of a national COVID-19 RDT validation study and coordination of the national seroprevalence survey for COVID-19.

## 4.12 Strategic Plans for 2021

- Establish a national public health knowledge repository and implement knowledge management approaches, tools and techniques for NCDC programmes
- Institutionalise occupational health and safety activities in NCDC
- Work with the NRL towards increasing the number of scientists with Strengthening Laboratory Management Toward Accreditation (SLMTA) certification at the laboratory.
- IPC policy will be prioritised for review and distribution, healthcare associated infections (HCAI) surveillance system would be established and an assessment of the National Water, Sanitation and Hygiene (WASH) facilities' capacity planned
- Develop a state-level engagement plan for AMR response and deployment of interventions to improve diagnostic and antibiotic stewardship are priorities

# 5

# DEPARTMENT OF SURVEILLANCE AND EPIDEMIOLOGY

The Department of Surveillance and Epidemiology develops, strengthens and effectively implements surveillance systems to detect, assess, notify and report diseases, conditions including public health events of international concern through the International Health Regulations (IHR) 2005.



HEAD OF DEPARTMENT/DIRECTOR:

**Mrs Elsie Ilori**

NUMBER  
OF STAFF

NUMBER OF CORPS  
MEMBERS AND  
INTERNS IN 2020

60 ▾ 2



## 5.1 Launch of the Revised IDSR Technical Guideline (3rd Edition)

The revised Integrated Disease Surveillance and Response (IDSR) Technical Guidelines was developed and launched with all key Ministries, Departments and Agencies (FMoH, FMARD, FMEv, NEMA, NPHCDA, NAFDAC), WHO and other partners in attendance. This 3rd edition reflects national priorities, policies, public health structures and incorporates new areas including disaster risk management, points of entry and IDSR, risk communication etc. In comparison to the 2010 and 2013 versions which had 22 and 40 priority diseases, respectively, this edition has 45 priority diseases including COVID-19.

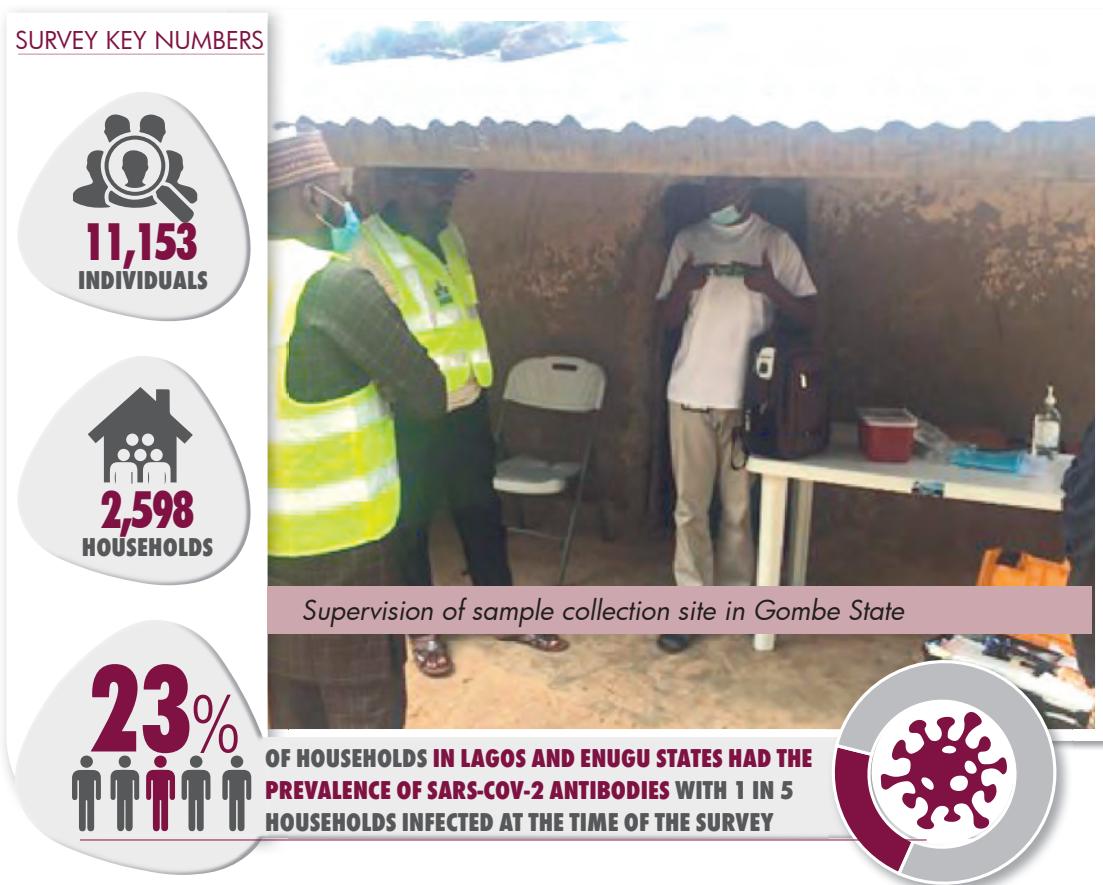
The launch was followed by orientation on key areas for all the 36 + 1 state teams. Additional virtual training was provided by the WHO-AFRO and NCDC with about 5,000 participants from Nigeria. Further training on the revised edition are planned to be delivered through the Integrated Training for Surveillance Officers in Nigeria (ITSON) and the IDSR health facility training.



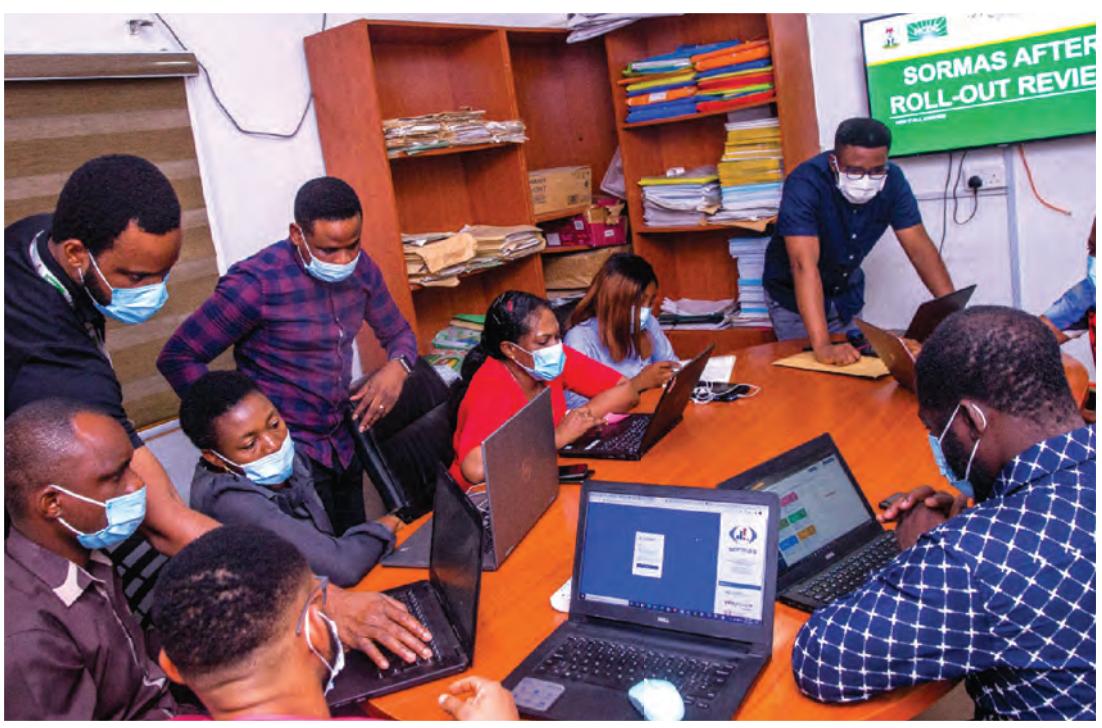
Launch of revised 3rd Edition IDSR Guidelines by DG NCDC with representatives of Federal Ministries of Health, Agriculture, Environment, WHO, World Bank, and Public Health England

## 5.2 COVID-19 Household Seroprevalence Survey

The NCDC in collaboration with NIMR, United States Centre for Disease Control (US CDC) and the University of Maryland, Baltimore (UMB), conducted the first Nigeria COVID-19 Household Seroprevalence Survey for COVID-19 in Gombe, Nasarawa, Lagos and Enugu States. This was to estimate the burden of COVID-19 in the country, given the occurrence of asymptomatic cases. The survey generated reliable data estimating the burden (seroprevalence of antibodies) of SARS-CoV-2 and transmission of COVID-19 in the Nigerian population. A sample of 11,153 individuals across 2,598 households, covering 0.05% were surveyed. Survey findings revealed that the prevalence of SARS-CoV-2 antibodies were 23% in Lagos, 23% in Enugu, 19% in Nasarawa and 9% in Gombe States. This means that as many as 1 in 5 individuals in Lagos, Enugu and Nasarawa State and 1 in 10 in Gombe State would have been infected with SARS-CoV-2 at the time of the survey.



### 5.2.1 SORMAS: Born In Nigeria, Shared with the World



#### Born in Nigeria

One of the key lessons learned from the West African Ebola virus disease (EVD) outbreak in 2014-2015, was the need for technologies that enable real-time digitalised reporting and response management to improve efficiency in outbreak containment.

Though useful, some of the challenges encountered with the use of the Open Data Kit (ODK) were lack of case notification, interlinkage between cases and contacts during contact tracing, delayed feedback and poor bi-directional information exchange between users. To mitigate these challenges, the Surveillance Outbreak Response Management and Analysis System (SORMAS) was developed for timely surveillance; independence from access to continuous electricity or internet; outbreak management (including contact tracing) analysis and reporting functionalities; and compatibility with existing standards and systems, e.g. Infectious Disease Surveillance and Response (IDSR) system, District Health Information Software (DHIS2) and International Health Regulations (IHR).

## 5. DEPARTMENT OF SURVEILLANCE AND EPIDEMIOLOGY



Brainstorming session at the beginning of SORMAS development in Nigeria



SORMAS exhibition at the 4th NCDC/NFELTP conference in Abuja

In 2017, SORMAS was successfully utilised in the monkeypox outbreak response and over time, broadened to include ten epidemic-prone diseases and One Health. A major feat for the SORMAS project was the hosting of a dedicated server for Nigeria (same as DHIS2) in NCDC, with all data owned and governed by the Government of Nigeria.

With the increase in the number of field users and continued roll-out in Nigeria in response to simultaneous outbreaks, IT Support Officers and State Implementation Officers were engaged to support field users in addressing concerns with the usage of the tool. Through funding from partners such as GIZ, Helmholtz Association of German Research Centres and BMGF, the number of diseases reported using SORMAS was expanded to 12 and further technical improvements were done on the platform to make it more user friendly. The Government of Nigeria showed its commitment to the project by supporting full deployment in three states through the Basic Health Care Provision Fund (BHPF). At the end of 2019, using lessons from Nigeria, SORMAS was piloted in Ghana with a clinical management module and global goods module added.

Amid the COVID-19 pandemic, additional updates were made to support the outbreak response to the disease in 2020. By the third quarter of 2020, SORMAS had been fully deployed and adapted for digital surveillance

to all the 774 LGAs across all the 36 States of the federation and the FCT. This was achieved ahead of the 2021 target earlier proposed.

#### *Shared With the World*

The collaboration between NCDC and the Helmholtz Centre for Infection Research (HZI) has been very impactful, with increasing global recognition of SORMAS. Before the COVID-19 pandemic, Nigeria and Ghana were the only countries using SORMAS. However, with the onset of the pandemic, countries such as Germany, France, Fiji, and Switzerland commenced full deployment of the tool. Other countries preparing to commence the use of SORMAS include Afghanistan, Nepal, Burkina Faso and Ivory Coast. So far, over 270 million people are covered on SORMAS worldwide. Given the success of SORMAS to date, the German Ministry for International Corporation is supporting the full rollout of SORMAS in the whole of the West and East African region and is confident that Nigeria will play a crucial role in the process.



SORMAS after-action dissemination workshop

## 5. DEPARTMENT OF SURVEILLANCE AND EPIDEMIOLOGY

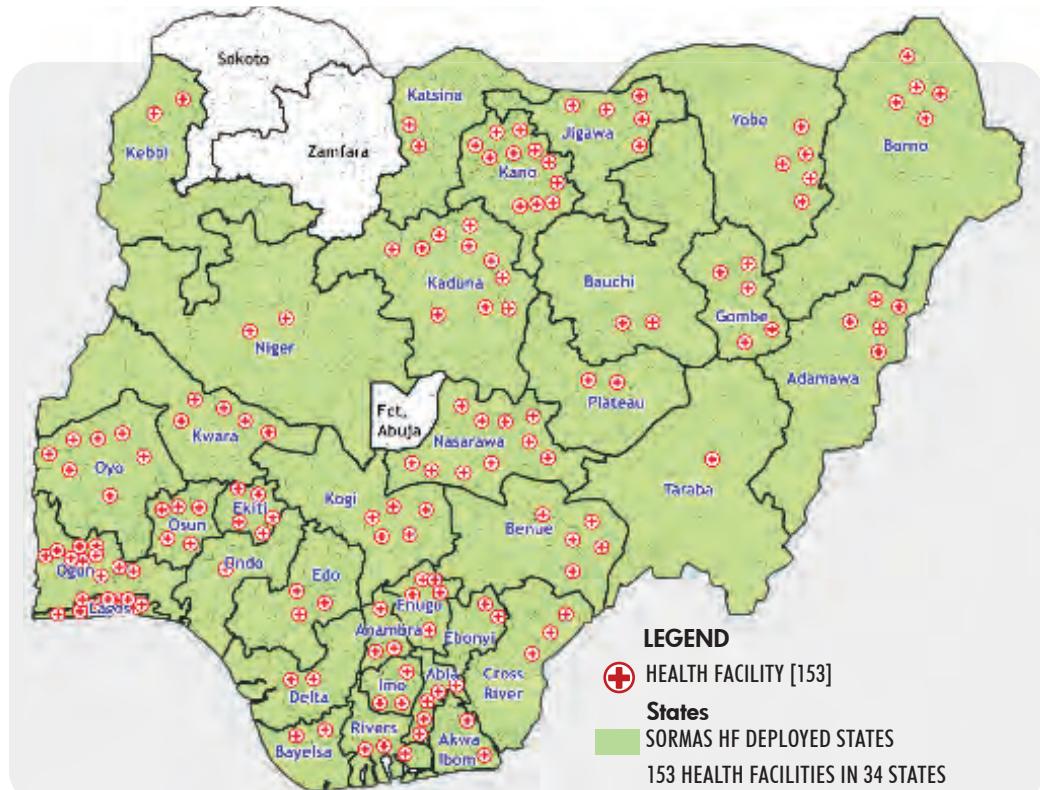


FIGURE 9: SORMAS Deployed Health Facilities in Nigeria

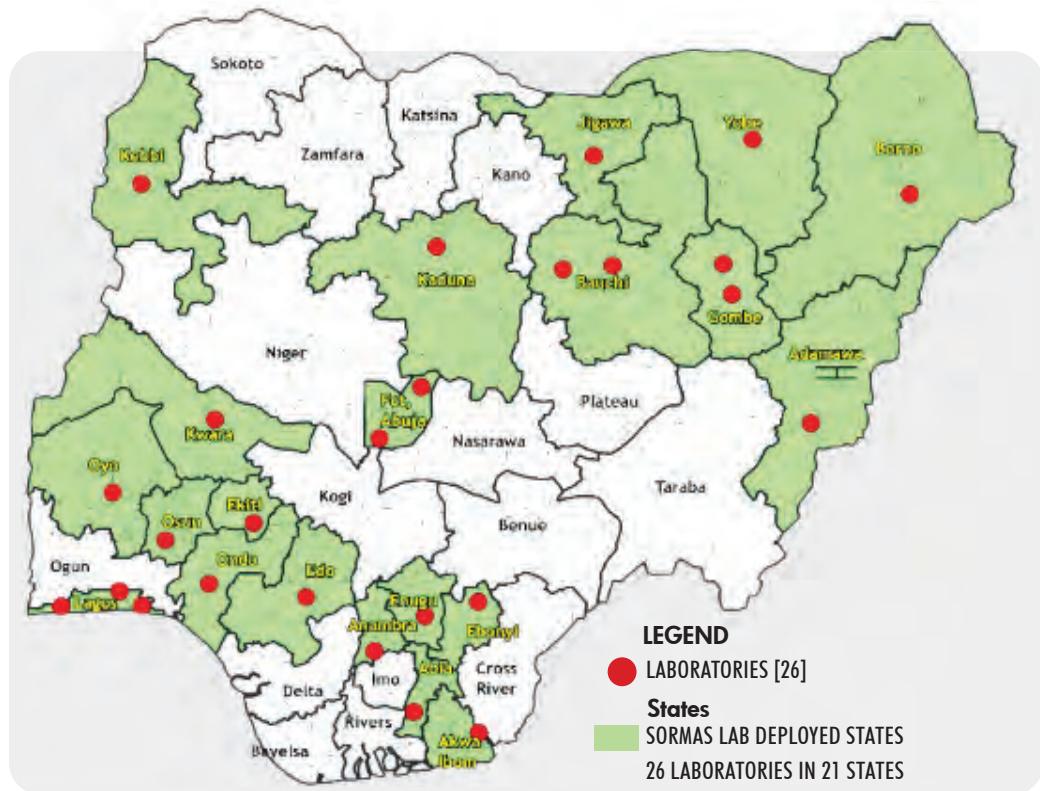
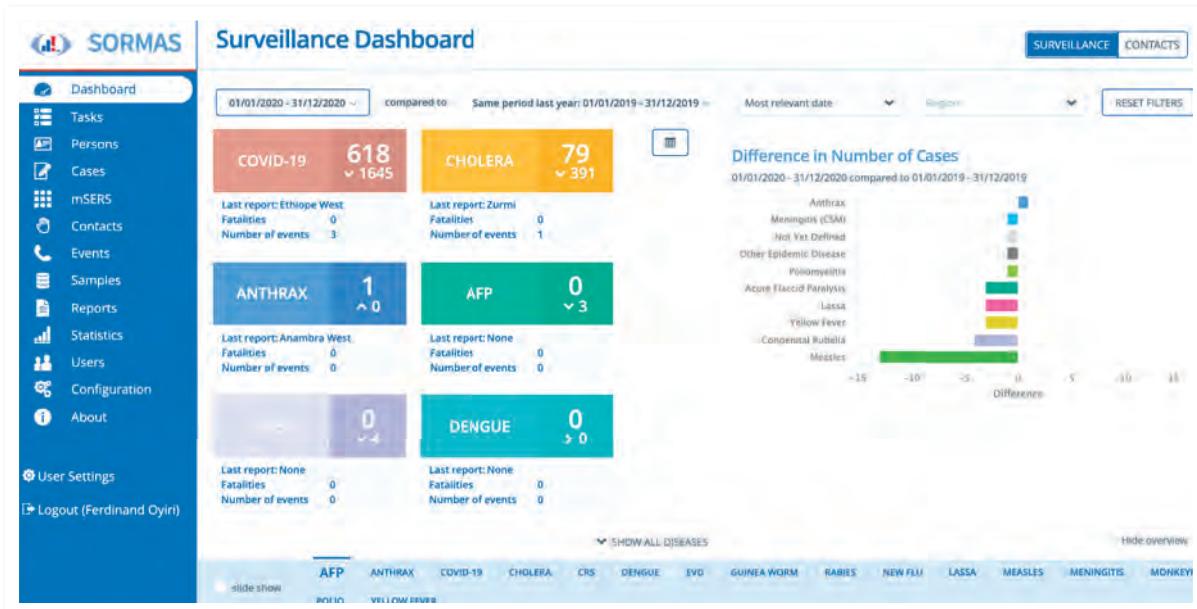


FIGURE 10: SORMAS Deployed Laboratories in Nigeria

## 5. DEPARTMENT OF SURVEILLANCE AND EPIDEMIOLOGY



Demonstration of data management using SORMAS

### 5.3 Integrated Training for Surveillance Officers in Nigeria (ITSON)

The NCDC developed the Integrated Training for Surveillance Officers in Nigeria (ITSON). This is a harmonised training package to address training needs for improved public health workforce development and enhanced surveillance at the sub-national levels. In 2020, NCDC began the roll-out of the ITSON training package in states to help address the gaps in achievement of the WHO target of 1 epidemiologist per 200,000 persons. The goal of ITSON is to develop a strong workforce with an improved understanding of surveillance and epidemiology methods, including data reporting, harmonisation and analysis.

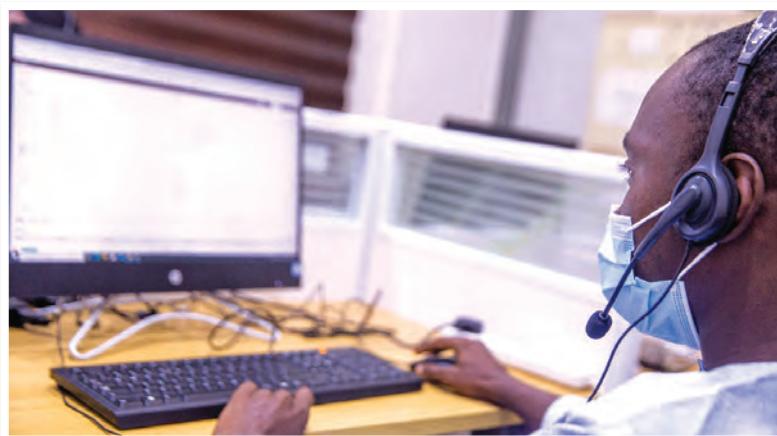
### 5.4 Expansion of the Connect Centre

The Connect Centre serves as a critical point of call to alert NCDC of a potential outbreak in any location or individuals presenting symptoms suggestive of diseases of public health importance. The COVID-19 pandemic led to increased traffic in the call lines that necessitated the expansion and upgrade of the Connect Centre to meet the public demand. The expansion included the procurement

of additional equipment and software; 24 hours operations, every day of the week; engagement of 81 volunteers; training of all call agents; securing a short code 6232 for use by the public; use of enhanced WhatsApp platform and development of a self-assessment/reporting web and BOT chat on the COVID-19 microsite. The Connect Centre successfully responded to 591,645 calls in 2020.



Meeting with the Connect Centre consultant on expansion plans



A Call Centre Operator at the NCDC Connect Centre

## 5.5 Subnational Emergency Response Capacity Building

A training assessment was conducted in Enugu, Kano and Kebbi States and Data for Action bottleneck analysis conducted in Kano and Kebbi States. This is part of the Subnational Emergency Response Capacity Building (SERCBC) project

supported by Resolve to Save Lives (RTSL). The SERCB project will support states in building sustainable and functional epidemic preparedness and response systems by fostering a culture of use of data for action at the subnational level.



*Bottleneck analysis review meeting in Kebbi state on SERCB project*

## 5.6 Strategic Plans for 2021

- Commence the roll-out of community-based surveillance across all States in Nigeria
- Implementation of the Integrated Training for Surveillance Officers in Nigeria (ITSON)
- Engage with all surveillance stakeholders in Nigeria through the "Annual Disease Surveillance Review Meeting"
- Conduct Joint External Evaluation at the sub-national level involving all states in Nigeria
- To provide monitoring and supportive supervision to ensure continuous use and ownership of SORMAS
- Develop an electronic platform for surveillance and laboratory information sharing between relevant sectors of the human, animal and environmental interface
- Strengthen wildlife disease surveillance
- Replicate One Health structure in all the 36 States plus FCT

# 6

# DEPARTMENT OF ADMINISTRATION AND HUMAN RESOURCES

The Department of Administration and Human Resources is responsible for human capital development and assets management. Responsible for staff career progression, recruitment, posting, discipline, establishment matters, record keeping and general services.



HEAD OF DEPARTMENT/DIRECTOR:

**Mr. Yakubu Abdullahi**

NUMBER  
OF STAFF

43

NUMBER OF CORPS  
MEMBERS AND  
INTERNS IN 2020



## 6.1 Upgrading Power Supply Systems

The Department led the upgrade of alternative power supply for the agency to facilitate the adequate provision of steady power and water supply to all campuses. This includes the installation of inverter systems, generator sets and solar systems supported by partners including Nigeria's Rural Electrification Agency, the German Government, European Union and US-CDC through e-Health Africa.



*Solar panel systems installed at NRL, Guduwa*

## 6.2 Provision of Additional Vehicles

Vehicles were purchased to boost operations and logistics for the deployment of rapid response teams (RRT) and response materials to various states as part of efforts to support and strengthen the COVID-19 response.



## 6.3 Medical Check-up for Transportation Unit Staff

A comprehensive eye check was carried out on all drivers and still ongoing to date. This ensures the wellbeing and overall alertness of drivers.



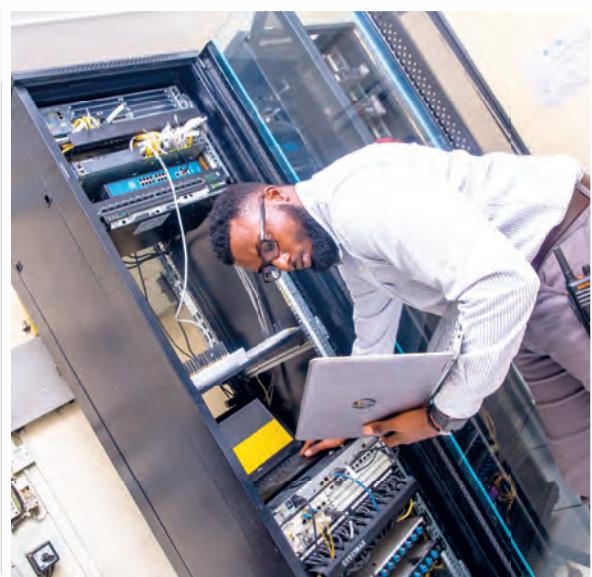
## 6.4 Recruitment of New Staff

The Department carried out the screening, enrolment and posting of all the newly recruited 100 members of staff in 2020.



## 6.5 Local Area Network Upgrade

With the increase in activities of NCDC as well as staff strength, there was an urgent need to scale-up the agency's internet, network and information systems. The IT Unit led this upgrade across various campuses, which increased productivity and efficiency within the agency.



## 6.6 Promotion Exercise

In 2020, led by the department, the agency held its first promotion exercise for eligible members of staff. Of 304 staff on the NCDC nominal roll, 24 members of staff were recommended for promotion based on their performance and other considerations.



## 6.7 Design and Deployment of NCDC Intranet Solution (APHIDS)

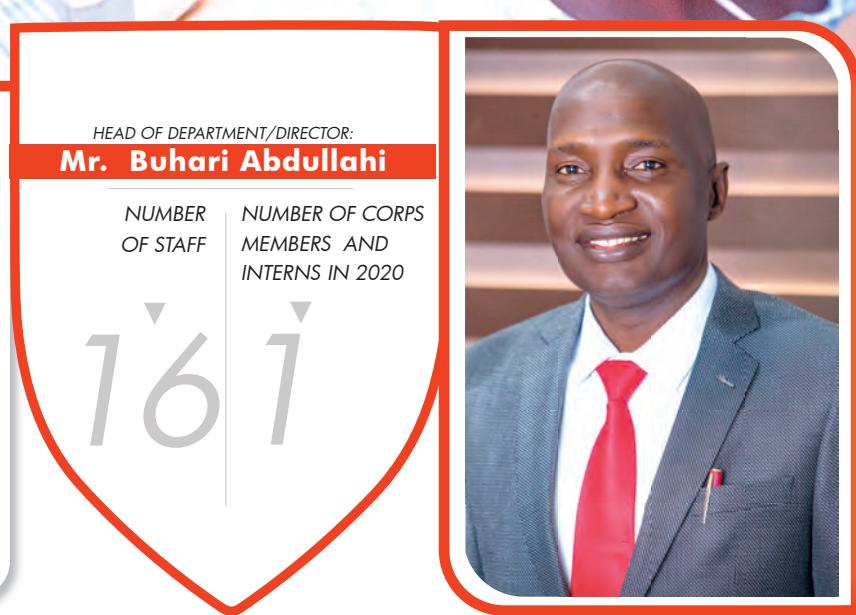
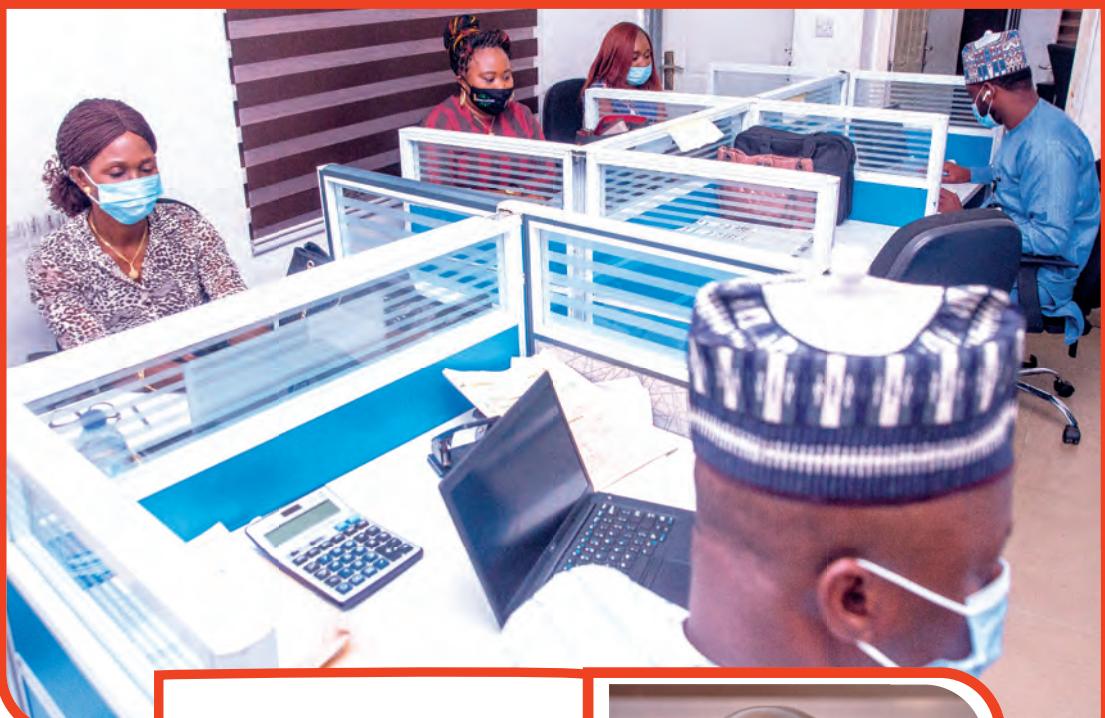
In collaboration with Georgetown University, the IT Unit developed and deployed the APHIDS platform, a management software for the efficient coordination of cross-cutting organisational issues. These include the staff nominal roll, asset management, leave approvals, basic information on projects etc.



# 7

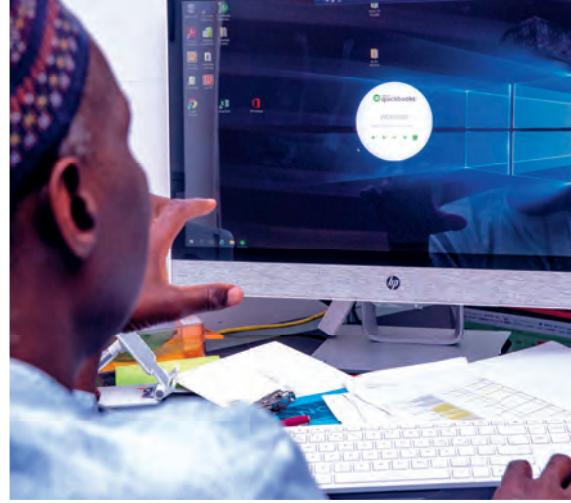
# DEPARTMENT OF FINANCE AND ACCOUNTS

The Department of Finance and Accounts is responsible for ensuring accountability in the management and disbursement of funds.



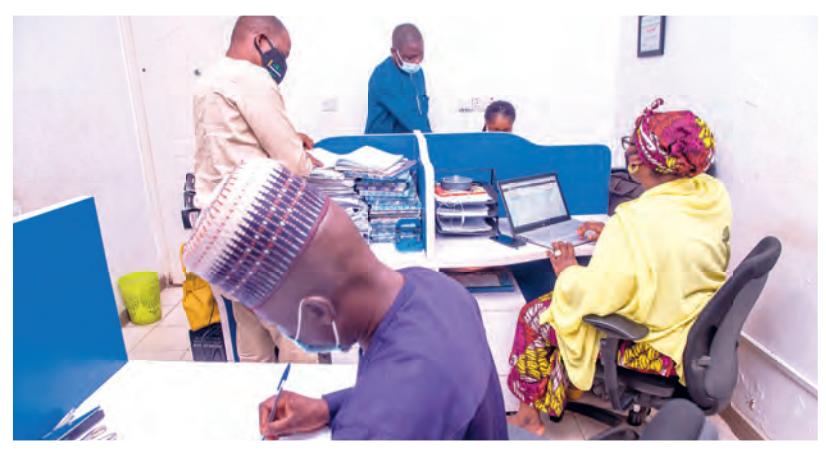
## 7.1 Successful Migration to QuickBooks

The Department successfully concluded the migration of all the agency's accounting books to QuickBooks, an accounting software to manage all the finance activities of the agency. This includes finance reconciliation, payroll, reporting etc. The introduction of QuickBooks is to improve the current structure and strengthen confidence and accountability between NCDC and donors as well as the Government.



## 7.2 Building Staff Capacity

Sixteen (16) members of staff were trained on the use of the computerised accounting system following its installation in 2019.



*Staff at work in the Accounts Department*

## 7.3 Asset Register

In 2020, the department developed a standard fixed asset register of all the assets acquired by the agency with naira value attached to each asset. This enhanced the effective utilisation of the agency's assets and auditing processes.

# 8

## NCDC IN THE MEDIA



**NOW LIVE!**

Head on to the COVID-19 blog to read more about **COVID-19**. **Nigeria Stories**, the pandemic response, personal experiences of COVID survivors and first line responders across different parts of the country.

<https://covid19blog.ncdc.gov.ng/>

## 8.1 Presidential Task Force on COVID-19

On March 9, 2020, President Muhammadu Buhari inaugurated a 12-person Presidential Task Force on COVID-19 (PTF-COVID-19) with a mandate to oversee the government's multi-sectoral and intergovernmental efforts. The Director General of the NCDC is part of this group, which is chaired by the Secretary to the Government of the Federation and includes a National Coordinator. The PTF-COVID-19 works with relevant government ministries, departments and agencies to provide guidance to the public on control measures for COVID-19. In 2020, the PTF-COVID-19 held over 70 press briefings, updating Nigerians on measures by the Federal Government to respond and manage the COVID-19 pandemic.



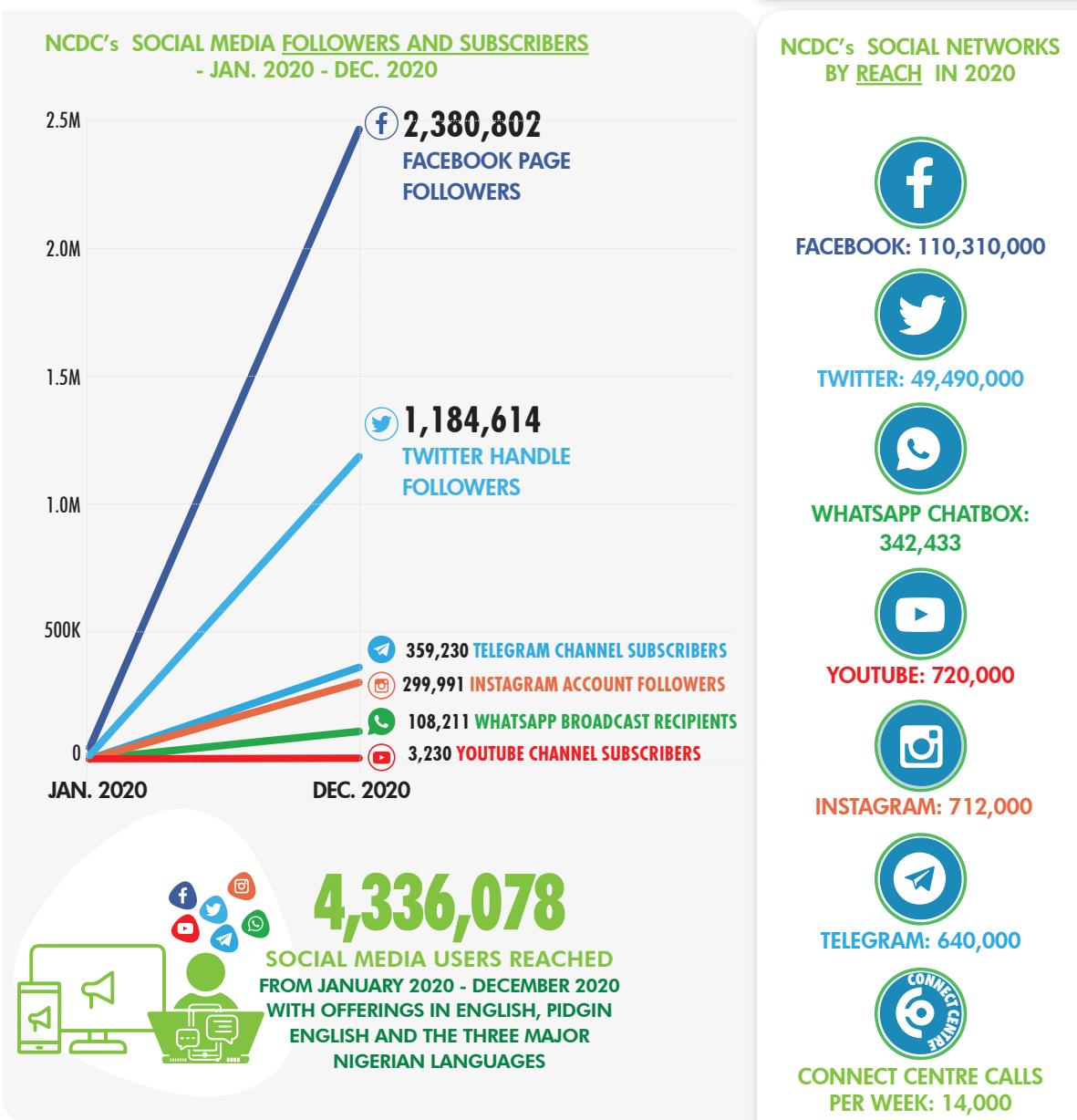
*Secretary to the Government of the Federation and PTF COVID-19 chairman, Boss Mustapha, briefs the press following an inspection of the Nnamdi Azikiwe Airport Abuja, ahead of its reopening after the national lockdown*



*DG at PTF COVID-19 media briefings*

## 8.2 Estimate of People Reached Through the NCDC Communications Platforms

In 2020, the reach and followers of NCDC across various social media platforms grew significantly, as shown below:



## 8. NCDC IN THE MEDIA

The official Facebook Page of the Nigeria Centre for Disease Control (NCDC). Visit [ncdc.gov.ng](http://ncdc.gov.ng) for more.

Social Media Policy: [ncdc.gov.ng/terms](http://ncdc.gov.ng/terms)  
#TakeResponsibility  
#FlattenTheCurve

1,138,979 people like this, including 27 of your friends

2,461,629 people follow this

4,550 people checked in here

<http://www.ncdc.gov.ng/>

0800 9700 0010

+234 708 711 0839

[info@ncdc.gov.ng](mailto:info@ncdc.gov.ng)

Closed now

Nigeria Centre for Disease Control

28 January at 04:56

Download and share our PATIENT's handbook for the HOME-BASED care of mild #COVID19 cases.

It includes:... See more

Table of Contents:

1. What is Coronavirus Disease 2019?	5
2. What is Home-based Care?	6
3. What is Home-based Isolation?	7
4. Why Home-based Isolation and Care?	8
5. Who is Eligible for Home-based Care?	9
6. Who is not Eligible for Home-based Care?	10
7. What Medicines can be Used During Home-based Care?	11
8. What Should be Done if Symptoms Worsen?	12
9. Infection Prevention Control for Households Members During Home-based Care	13
10. When Can I End Home-based Isolation?	20
11. Caregiver's Health	21
12. Home-based Techniques to Manage Your Cough	21

Muhammadu Buhari @MBuhari · Mar 29, 2020

Since the outbreak was reported in China, our Government has been monitoring the situation closely and studying the various responses adopted by other countries.

11 167 273

Muhammadu Buhari @MBuhari

Replying to @MBuhari

Indeed, the Director General of the [@NCDCgov](#) was one of ten global health leaders invited by the World Health Organisation to visit China and understudy their response approach. I am personally very proud of Dr [@Chikwe\\_I](#) for doing this on behalf of all Nigerians.

7:04 PM · Mar 29, 2020 · Twitter Web App

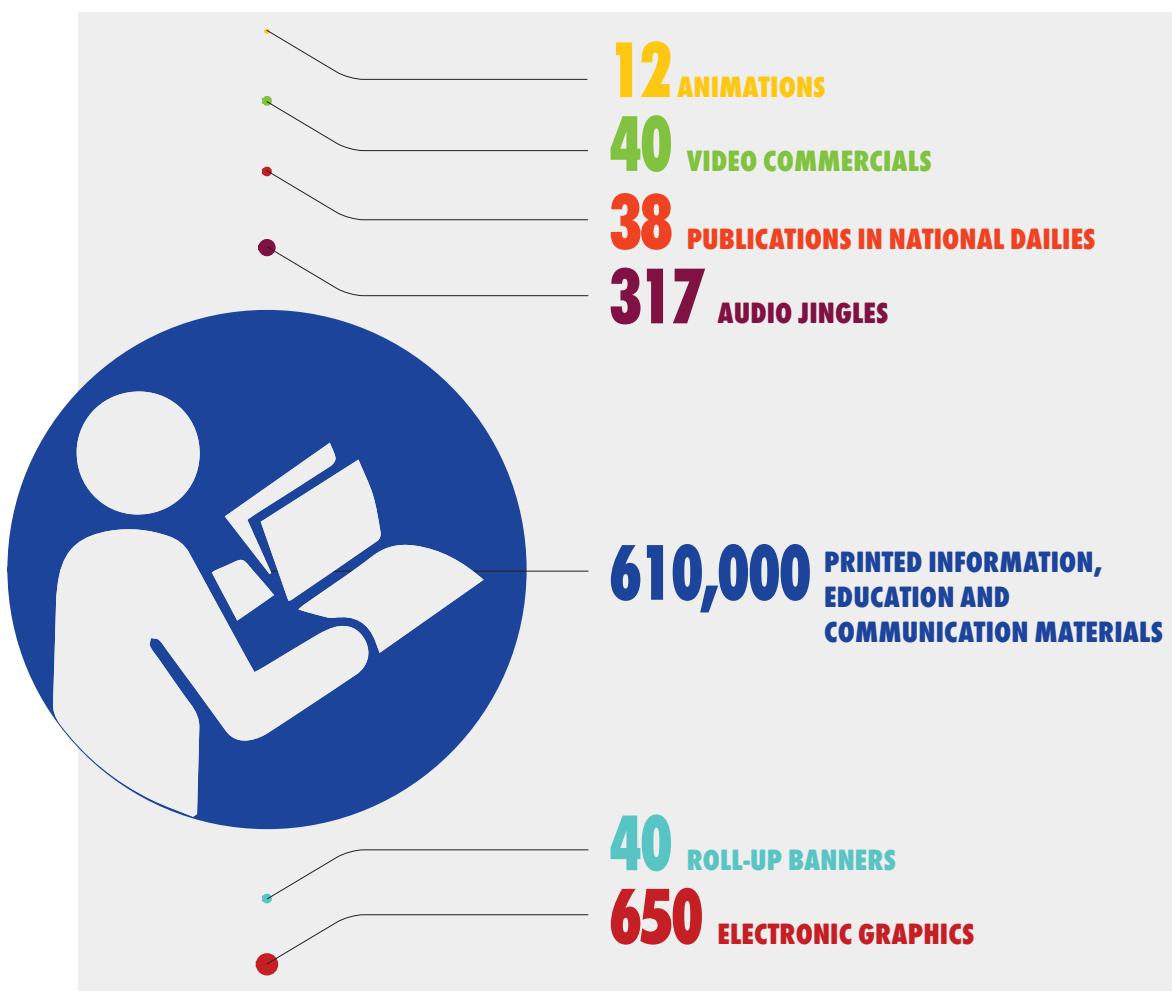
### 8.3 Number of Media Engagements and Appearances by the Director General and Other Members of Staff

NCDC conducted over 500 media appearances on TV, radio, online and print media platforms focused on the response to COVID-19 in Nigeria, at both national and sub-national levels.

### 8.4 Risk Communication

To scale-up risk communications for COVID-19, a robust network of partners and platforms across disciplines and sectors was established. This strengthened system capacity for messaging, community engagement and infodemic management.

#### 8.4.1 Communication Outputs



### 8.4.2 Training Conducted



### 8.5 Take Responsibility

The NCDC launched a national flagship campaign with the slogan 'Take Responsibility', to encourage the adoption of COVID-19 preventive measures as recommended by the agency towards controlling the spread of the disease in Nigeria. A total of 21 sets of key messages were developed reflecting preventive measures, rumour response and government guidelines. This is in addition to the content shared with various mobile network providers weekly, disseminated to over 40 million Nigerians per day. Over 50 guidelines have been developed, across key response areas of laboratory services, case management, infection prevention control, risk communications and several others.

#### KEY NUMBERS

**21**  
SETS OF KEY  
MESSAGES WERE  
DEVELOPED  
FOR THE 'TAKE  
RESPONSIBILITY'  
CAMPAIGN



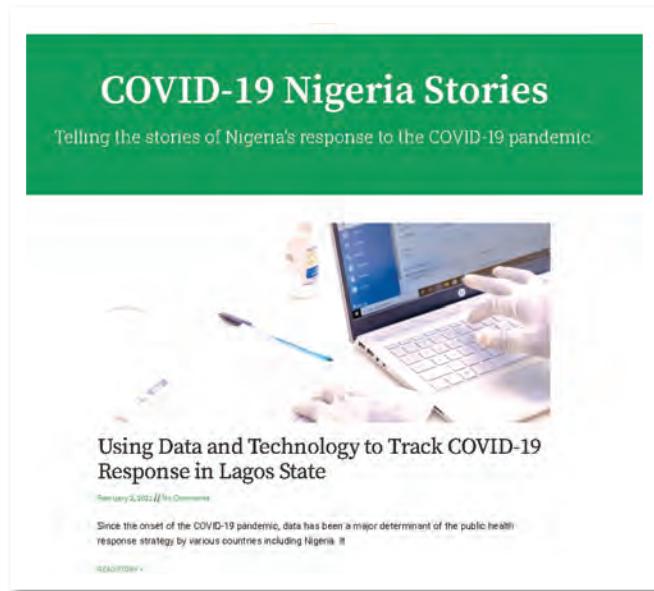
## 8.6 Development of COVID-19 Microsite

To give the public real-time access to information on COVID-19, a microsite with updates on various aspects of Nigeria's response including advisories, state helplines, FAQs, information, education and communication (IEC) materials, guidelines and so on, was developed. In 2020, the site had over 197,944 downloads and more than 3.8 million visits from within and outside the country. The site can be accessed via <https://covid19.ncdc.gov.ng/>



## 8.7 COVID-19 Nigeria Stories

In collaboration with Ford Foundation and Nigeria Health Watch, NCDC developed the COVID-19 Nigeria Stories Blog which documents human-interest stories and response activities by various stakeholders at the national and state level.



# 9

## IMPLEMENTATION OF MAJOR PROJECTS BY NCDC



## 9.1 REDISSE Project

The Regional Disease Surveillance Systems Enhancement (REDISSE) project is a World Bank credit aimed at strengthening countries in the Economic Community of West African States (ECOWAS) sub-region following the 2014 West African Ebola crisis. Nigeria is one of the 11 recipient countries of this World Bank credit in Africa.

The REDISSE project is implemented across the human and animal health sectors in Nigeria, with coordination by NCDC. In 2020, resources from the project were used to strengthen Nigeria's COVID-19 response activities as well as core components for health security across the following areas.

### 9.1.1 N100 million COVID-19 Grant and Technical Support to States

The project supported each state with a grant of N100m. This was to support the implementation of COVID-19 Incident Action Plans developed by the states with support from NCDC, to deliver high impact, time-bound interventions. The REDISSE project also supported the deployment of Technical Advisors to assist with the effective implementation of the incident action plans (IAPs).



NCDC DG, Dr. Chikwe Ihekweazu, and Chairman of the Nigeria Governors' Forum and Executive Governor, Dr. Kayode Fayemi

### **9.1.2 Establishment of Infectious Disease Treatment Centres**

Following a safeguard screening and scoping activity, the project is funding the construction and equipping of COVID-19 infectious disease treatment centres in Lagos, Rivers, Enugu, Kwara and Kano States. Additionally, Infection, Prevention and Control (IPC) materials were procured and distributed to states, MDAs, treatment centres and Federal Teaching Hospitals.

### **9.1.3 Laboratory Services**

The NCDC Laboratory Information Systems received technical support to improve testing capacity for detection of priority diseases. Diagnostic activities for COVID-19 and other priority diseases were also supported through the recruitment of 10 ad hoc laboratory staff, and procurement of essential testing equipment, consumables, and reagents.

### **9.1.4 State Public Health Emergency Operations Centres (PHEOCs)**

To increase capacity for preparedness and response to public health emergencies like COVID-19, PHEOCs were provided with video conferencing equipment and vehicles to facilitate EOC operations.



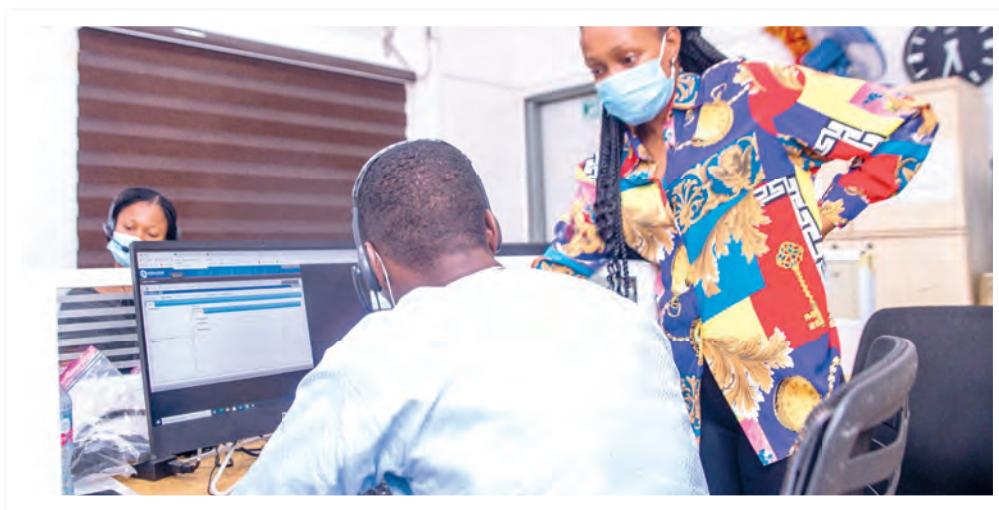
Fleet of Toyota Hilux Vehicles donated to State PHEOCs by the REDISSE Project.



22kVA generator set donated to the State PHEOCs

### 9.1.5 NCDC Connect Centre

About eighty volunteers were recruited to meet the increasing demand at the NCDC call centre for the COVID-19 response. The REDISSE project supported the payment of allowances to call centre staff and the provision of 20 laptops, headsets and power extension cables.



### 9.1.6 SORMAS

The REDISSE project supported SORMAS training across nine states: Abia, Adamawa, Gombe, Benue, Kogi, Osun, Ekiti, Yobe and Kwara. Furthermore, 106 laptops and 690 tablets were also procured for use by surveillance officers.



*Chimezie Anueyiagu supporting the Imo State Health Team as part of the deployed Technical Advisors supported by the REDISSE Project*

In addition to the COVID-19 response, the REDISSE project has continued to support other core activities:

- **Surveillance and Information Systems:** The REDISSE project supported the funding of additional human resource deployed to support states with the use of SORMAS. In addition, resources from the project were used to finalise the IDSR guideline, print and distribute IDSR tools and documents to states, Local Government Areas (LGAs) and health facilities. Furthermore, 53 port health officials were trained at points of entry (PoE) in Lagos, Kano, Rivers and Abuja.
- **Strengthening of Laboratory Capacity:** The REDISSE project provided additional funding for the national specimen transportation mechanism for laboratories across the country. The project also supported the recruitment of 20 laboratory personnel to meet the increasing demands as a result of the pandemic. A significant amount of project resources were used in the procurement of laboratory commodities, reagents and supplies.
- **Emergency Preparedness and Response:** Drugs, commodities, consumables and other medical supplies for Lassa fever and other priority infectious diseases were procured and prepositioned across relevant states. Other support included Public Health Emergency Operations training for security agencies; training and deployment of 290 personnel for national rapid response teams (nRRTs); and the procurement, installation and training on use of dialysis machines to support Lassa fever management at Federal Medical Centres and teaching hospitals.
- **Human Resource Strengthening:** The project funded the training of 47 residents as part of the advanced Nigeria Field Epidemiology and Laboratory Training Programme (NFELETP). Surge staff were also recruited to support Lassa fever outbreak response in Edo and Ondo States.

The project will continue to support other activities in line with Nigeria's National Action Plan for Health Security and other priorities.

## 9.2 Lassa Fever Epidemiology Study

After the first ever Lassa fever International Conference hosted by NCDC in 2019, a major gap identified was limited research activities for the disease. In 2020, Nigeria experienced the largest outbreak of Lassa fever with a large number of healthcare workers infected. With support from Coalition for Epidemic Preparedness Innovations (CEPI), NCDC launched the largest ever Lassa fever research programme in West Africa known as the Nigeria Lassa Fever Epidemiology (NiLE) study, to provide a better understanding of the Lassa fever burden in Nigeria and West Africa and contribute to the overall goal of the development of the Lassa fever vaccine.

## 9.3 Midterm-Action Review of COVID-19 Response

NCDC conducted a Midterm Action Review (MAR) of the country's public health response to the COVID-19 outbreak. This served to review the dynamics of the response across various pillars of the national EOC, and the wide-ranging socio-economic impact of the outbreak for a more structured and focused approach.



Midterm-Action Review of COVID-19 Response by NCDC and partners

# 10 PHOTO HIGHLIGHTS



## 10. PHOTO HIGHLIGHTS

World Bank- REDISSE  
Project Officers



Inside the office of the  
Head, NCDC  
Procurement Unit



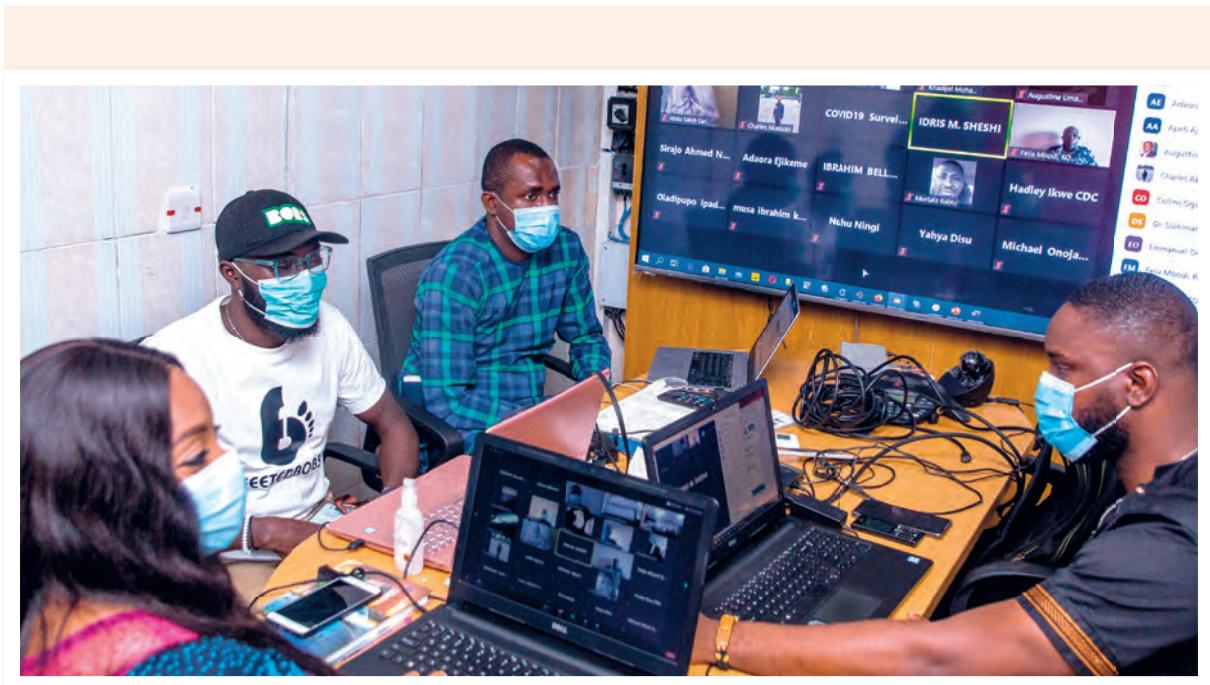
TBI Country Office Team  
at the NCDC HQ



AFENET Team



## 10. PHOTO HIGHLIGHTS



The NCDC ICC watch-staff having a virtual meeting in the break-out room



The NCDC Legal Unit

NFEITP Implementation Team



e-Health Africa Country Team working closely with NCDC



## 10. PHOTO HIGHLIGHTS

An Emergency Operations Centre (EOC) meeting in progress



The Corporate Communications Team

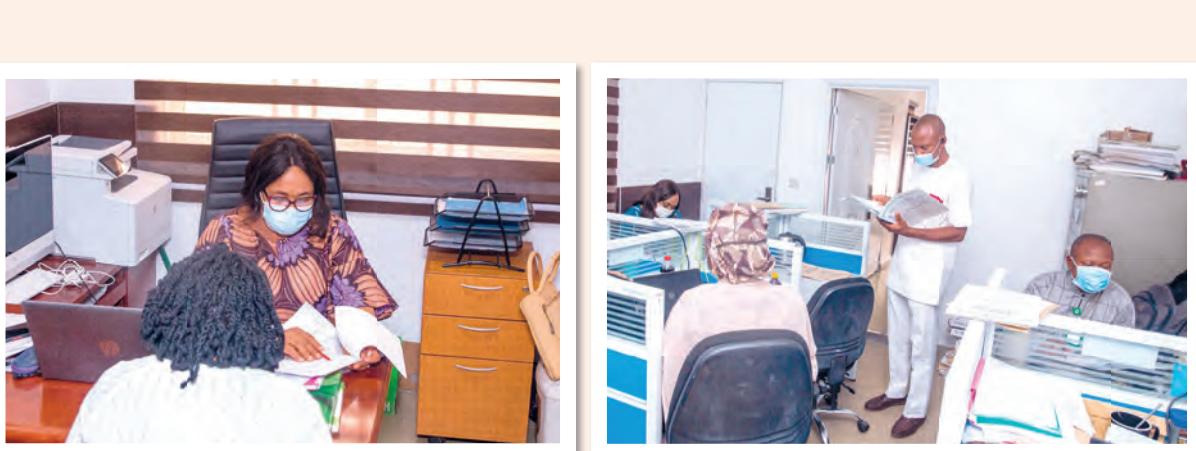


NCDC and KOICA officials at NRL, Gaduwa

Honourable Minister of Health's visit to NCDC



## 10. PHOTO HIGHLIGHTS



Mrs Jane Udon, the NCDC Head of Internal Audit Unit

Some staff of the Accounts Department

Staff meeting facilitated by Dr. Aderinola Olaolu, Incident Manager, COVID-19



Staff of NCDC celebrating the 2020 Nigeria's Independence Day at the office



## 10. PHOTO HIGHLIGHTS

The Nigerian Air Force supported the 'Mission to Nigerian States' towards strengthening public health response of the states



The Director General briefing the NCDC drivers who played a critical role at the peak of the COVID-19 pandemic



Miss Khadijah Iyimoga, a NCDC Administrative Officer taking inventory of files in the registry



ICT Unit, setting up one of the screens, donated by Victim Support Fund (VSF) towards the COVID-19 response



## 10. PHOTO HIGHLIGHTS



*Handover of test kits  
donated by IHS Tower*

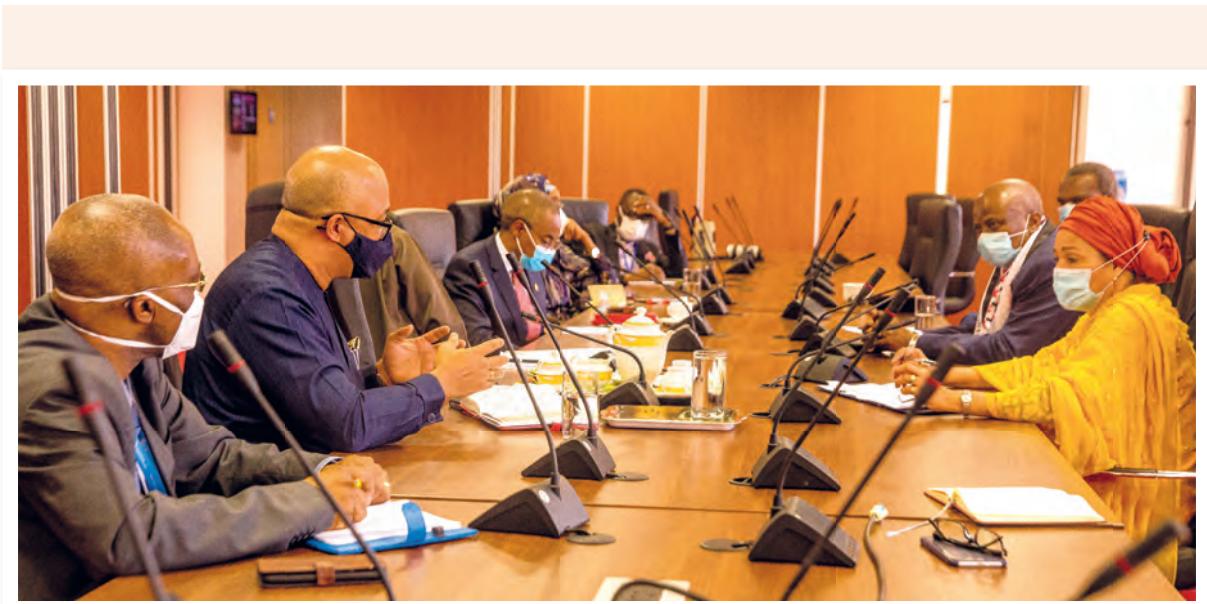


*DG on routine rounds  
across the departments*



*Dr Ibekwe on virtual round  
table conversation*

## 10. PHOTO HIGHLIGHTS



Members of PTF-COVID-19 update the UN Deputy Secretary General, Amina Mohammed, on the national response efforts to COVID-19



NSCDC courtesy visit to NCDC



IHS Towers and UNICEF in NRU

## 11

## STAFF PUBLICATIONS

**Open access**

**Original research**

**BMJ Open** Patient characteristics associated with COVID-19 positivity and fatality in Nigeria: retrospective cohort study

Kelly Osezele Elimian ,<sup>1,2</sup> Chinwe Lucia Ochu ,<sup>1</sup> Blessing Ebhodaghe,<sup>1</sup> Puja Myles,<sup>3</sup> Emily E Crawford,<sup>1</sup> Ehimario Igumbor,<sup>1,4</sup> Winifred Ukpunu,<sup>5</sup> Adobola Olayinka,<sup>6,7</sup> Olusola Aruna,<sup>8,9</sup> Chioma Dan-Nwafor,<sup>10</sup> Olatayo Ayodeji Olawepo,<sup>5</sup> Oladipo Ogunbode,<sup>1</sup> Rhoda Atteh,<sup>10</sup> William Nwachukwu,<sup>10</sup> Sudhir Venkatesan,<sup>11,12</sup> Chijioke Obagha,<sup>13</sup> Samuel Ngishe,<sup>14</sup> Kabir Suleiman,<sup>15</sup> Muhammad Usman,<sup>16</sup> Hakeem Abiola Yusuff,<sup>17</sup> Ifeoma Nwadiuto,<sup>18</sup> Abbas Aliyu Mohammed,<sup>19</sup> Rabi Usman,<sup>20</sup> Nwando Mba,<sup>21</sup> Olaolu Aderinola,<sup>22</sup> Elsie Ilori,<sup>10</sup> John Oladejo,<sup>22</sup> Ibrahim Abubakar ,<sup>23</sup> Chikwe Ihekweazu<sup>24</sup>

To cite: Elimian KO, Ochu CL, Ebhodaghe B, et al. Patient characteristics associated with COVID-19 positivity and fatality in Nigeria: retrospective cohort study. *BMJ Open* 2020;10:e040730. doi:10.1136/bmjopen-2020-040730

**ABSTRACT**

**Objective** Despite the increasing disease burden, there is a dearth of context-specific evidence on the risk factors for COVID-19 positivity and fatality in Nigeria.

**Strengths and limitations of this study**

- This is the first study to identify contextual socio-economic and clinical risk factors for COVID-19 positivity and fatality in Nigeria.

Nigeria's public health response to the COVID-19 pandemic: January to May 2020

Chioma Dan-Nwafor<sup>1</sup>, Chinwe Lucia Ochu<sup>1</sup>, Kelly Elimian<sup>1</sup>, John Oladejo<sup>1</sup>, Elsie Ilori<sup>1</sup>, Chukwuma Umeokonkwo<sup>2,3</sup>, Laura Steinhardt<sup>4</sup>, Ehimario Igumbor<sup>1,5</sup>, John Waga<sup>6</sup>, Tochi Okwor<sup>1</sup>, Olaolu Aderinola<sup>1</sup>, Nwando Mba<sup>1</sup>, Assad Hassan<sup>1</sup>, Mahmood Dalhat<sup>1,7</sup>, Kola Jinadu<sup>1</sup>, Sikiru Badaru<sup>1</sup>, Chinedu Arinze<sup>1</sup>, Abubakar Jaliya<sup>1</sup>, Yahya Disu<sup>1</sup>, Fatima Saleh<sup>1</sup>, Anwar Abubakar<sup>1</sup>, Celestina Obiekeas<sup>1</sup>, Adesola Yinka-Ogunleye<sup>1</sup>, Dhamari Naidoo<sup>8</sup>, Geoffrey Namara<sup>9</sup>, Saleh Muhammad<sup>1</sup>, Oladipupo Ipadeola<sup>1</sup>, Chinonye Ofoegbunam<sup>1</sup>, Oladipo Ogunbode<sup>1</sup>, Charles Akatobi<sup>2</sup>, Matthias Alagi<sup>1</sup>, Rimamideyati Yashé<sup>1</sup>, Emily Crawford<sup>1</sup>, Oyeladun Okunromade<sup>1</sup>, Everistus Aniaku<sup>1</sup>, Sandra Mba<sup>1</sup>, Emmanuel Agogo<sup>7</sup>, Michael Olugbile<sup>1</sup>, Chibuzo Eneh<sup>1</sup>, Anthony Ahumibe<sup>1</sup>, William Nwachukwu<sup>1</sup>, Priscilla Ihekwe<sup>1</sup>, Ope-Oluwa Adejoro<sup>9</sup>, Winifred Ukpunu<sup>10</sup>, Adebola Olayinka<sup>6</sup>, Ifeanyi Okudo<sup>6</sup>, Olusola Aruna<sup>11</sup>, Fátima Yusuf<sup>12</sup>, Morenike Alex-Oko<sup>12</sup>, Temidayo Fawole<sup>1</sup>, Akeem Alaka<sup>1</sup>, Hassan Muntari<sup>1</sup>, Sebastian Yennan<sup>1</sup>, Rhoda Atteh<sup>1</sup>, Muhammad Balogun<sup>2</sup>, NdadiNasiya Waziri<sup>2</sup>, Abiodun Ogundiyi<sup>1</sup>, Blessing Ebhodaghe<sup>1</sup>, Virgile Lokossou<sup>13</sup>, Mohammed Abdulaziz<sup>14</sup>, Bimpe Adebayo<sup>15</sup>, Akin Abayomi<sup>16</sup>, Ismail Abudus-Salam<sup>16</sup>, Sunday Omilabu<sup>17</sup>, Lukman Lawal<sup>18</sup>, Mohammed Kawu<sup>18</sup>, Basheer Muhammad<sup>19</sup>, Aminu Tsanyawa<sup>19</sup>, Festus Soyinka<sup>20</sup>, Tomi Coker<sup>20</sup>, Olaniran Alabi<sup>21</sup>, Tony Joannis<sup>22</sup>, Ibrahim Dalhatu<sup>1</sup>, Mahesh Swaminathan<sup>1</sup>, Babatunde Salako<sup>23</sup>, Ibrahim Abubakar<sup>23</sup>, Braka Fiona<sup>6</sup>, Patrick Nguku<sup>1</sup>, Sani H-Aliyu<sup>23</sup>, Chikwe Ihekweazu<sup>24</sup>

VIEWPOINTS

PUBLICATION TITLE: ***The multi-sectoral emergency response to a cholera outbreak in Internally Displaced Persons camps in Borno State, Nigeria, 2017.***

AUTHORS: Moise Chi Ngwa, Alemu Wondimagegnehu, Ifeanyi Okudo, Collins Owili, Uzoma Ugochukwu, Peter Clement, Isabelle Devaux, Lorenzo Pezzoli, **Chikwe Ihekweazu**, Mohammed Abba Jimme, Peter Winch

JOURNAL/DATE OF PUBLICATION: **BMJ Global Health. January 28, 2020.**

DOI: [5\(1\)](#)

PUBLICATION TITLE: ***The response to re-emergence of Yellow Fever in Nigeria, 2017.***

AUTHORS: **Nwachukwu William**, H. Yusuff, U. Nwangwu, A. Okon, **Abiodun Ogunniyi**, J. Imuetinyan-Clement, M. Besong, P. Ayo-Ajayi, J. Nikau, A. Baba, F. Dogunro, B. Akintunde, M. Oguntoye, K. Kamaldeen, O. Fakayode, Oyeronke Oyebanji, O. Emelife, J. Oteri, Olusola Aruna, **Elsie Ilori**, Olubunmi Ojo, **Nwando Mbà**, Patrick Nguku, **Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **International Journal of Infectious Diseases. January 2020.**

PUBLICATION TITLE: ***Preparedness for emerging epidemic threats: a Lancet Infectious Diseases Commission***

AUTHORS: Lee Vernon, Aguilera Ximena, Heymann David, **Chikwe Ihekweazu**, Wilder-Smith Annelies, and collaborators on the Lancet Infectious Diseases Commission.

JOURNAL/DATE OF PUBLICATION: **Lancet Infectious Diseases. January 2020,**

DOI: [20\(1\):17-19](#)

PUBLICATION TITLE: ***Nigeria's Joint External Evaluation and National Action Plan for Health Security.***

AUTHORS: Olubunmi Eiyitayo Ojo, Mahmoud Dalhat, Richard Garfield, Chris Lee, **Oyeronke Oyebanji**, Ajani Oyetunji, and **Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **Health Security. January/February 2020.**

DOI: [18\(1\):16-20](#)

PUBLICATION TITLE: ***COVID-19: what is next for public health?***

AUTHORS: David Heymann, **Chikwe Ihekweazu**, Nahoko Shindo on behalf of the WHO Scientific and Technical Advisory Group for Infectious Hazards.

JOURNAL/DATE OF PUBLICATION: **Lancet. February 13, 2020**

DOI: [10:3180](#)

PUBLICATION TITLE: **Importance of epidemiological research of monkeypox: Is incidence increasing?**

AUTHORS: **Chikwe Ihekweazu, Adesola Yinka-Ogunleye, Swaib Lule, Abubakar Ibrahim**

JOURNAL/DATE OF PUBLICATION: **Expert Review of Anti-infective Therapy. February 25, 2020.**

PUBLICATION TITLE: **Use of surveillance outbreak response management and analysis system for human monkeypox outbreak, Nigeria, 2017-2019**

AUTHORS: Silenou, Bernard C, Tom-Aba Daniel, Adeoye Olawunmi, **Arinze Chinedu C, Oyiri Ferdinand, Suleman, Anthony K, Yinka Ogunleye Adesola, Dörrbecker Juliane, Chikwe Ihekweazu, Krause Gérard.**

JOURNAL/DATE OF PUBLICATION: **Emerging Infectious Diseases. February 2020, 26(2):345-349**

DOI: [10.3201/eid2602.191139](https://doi.org/10.3201/eid2602.191139)

PUBLICATION TITLE: **Field notes from the Nigeria Centre for Disease Control 2019 pilot internship program for resident doctors**

AUTHORS: Oluwatomi Iken, **Elimian Kelly, Ochu Chinwe, Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **Pan African Medical Journal. March 25, 2020.**

DOI: [35:88.](https://doi.org/35:88)

PUBLICATION TITLE: **COVID-19: towards controlling of a pandemic**

AUTHORS: Juliet Bedford, Delia Enria, Johan Giesecke, David Heymann, **Chikwe Ihekweazu, Gary Kobinger, Clifford Lane, Ziad Memish, Myoung-don Oh, Amadou Alpha Sall, Anne Schuchat, Kumnuan Ungchusak, Lothar Wieler** on behalf of the WHO Scientific and Technical Advisory Group for Infectious Hazards

JOURNAL/DATE OF PUBLICATION: **Lancet. March 28, 2020.**

DOI: [395\(10229\)](https://doi.org/395(10229)

PUBLICATION TITLE: **What are the drivers of recurrent cholera transmission in Nigeria? Evidence from a scoping review**

AUTHORS: Elimian Kelly, Mezue Somto, Musah Anwar, Oyebanji Oyeronke, Fall Ibrahima, **Yennan Sebastian, Yao Michel, Abok Patrick, Williams Nanpring, Omar Lynda, Balde Thieno, Ampah Kobina, Okudo Ifeanyi, Ibrahim, Luka, Jinadu Arisekola, Alemu, Wondimagegnehu, Peter Clement, Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **BMC Public Health. April 3, 2020.**

DOI: [20\(1\):432](https://doi.org/20(1):432)

PUBLICATION TITLE: ***The prevalence of noma in northwest Nigeria***

AUTHORS: Elise Farley, Modupe Oyemakinde, Jorien Schuurmans, Cono Ariti, **Fatima Saleh**, Gloria Uzoigwe, Karla Bil, Bukola Oluyide, Adolphe Fotso, Mohana Amirtharajah, Jorieke Vyncke, Raphael Brechard, Adeniyi Semiyu Adetunji, Koert Ritmeijer, Saskia van der Kam, Denise Baratti-Mayer, Ushma Mehta, Shafi'u Isah, Annick Lenglet, **Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **BMJ Glob Health. April 14, 2020.**

DOI: [5\(4\)](#)

PUBLICATION TITLE: ***Clinical course and outcome of human monkeypox in Nigeria***

AUTHORS: Dimie Ogoina, Regina Oladokun, **Adesola Yinka-Ogunleye**, Paul Wakama, Bolaji Otike-odibi, Liman Muhammed Usman, Emmanuel Obazee, Olusola Aruna, and **Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **Clinical Infectious Diseases. April. 2020**

PUBLICATION TITLE: ***Is Africa prepared for tackling the COVID-19 (SARS-CoV-2) epidemic. Lessons from past outbreaks, ongoing pan-African public health efforts, and implications for the future***

AUTHORS: Nathan Kapata, **Chikwe Ihekweazu**, Francine Ntoumi, Tajudeen Raji, Pascalina Chanda-Kapata, Peter Mwaba, Victor Mukonka, Matthew Bates, John Tembo, Victor Corman, Sayoki Mfinanga, Danny Asogun, Linzy Elton, Liá Bárbara Arruda, Margaret J. Thomason, Leonard Mboera, Alexei Yavlinsky, Najmul Haider, David Simons, Lara Hollmann, Swaib Lule, Francisco Veas, Muzamil Mahdi Abdel Hamid, Osman Dar, Sarah Edwards, Francesco Vairo, Timothy McHugh, Christian Drosten, Richard Kock, Giuseppe Ippolito, Alimuddin Zumla

JOURNAL/DATE OF PUBLICATION: **Int J Infect Dis. April, 2020.**

DOI: [93:233](#)

PUBLICATION TITLE: ***A rapid assessment of the implementation of integrated disease surveillance and response system in Northeast Nigeria, 2017***

AUTHORS: Luka Ibrahim, Mary Stephen, Ifeanyi Okudo, Samuel Mutbam Kitgakka, Ibrahim Njida Mamadu, Isha Fatma Njai, Saliu Oladele, Sadiq Garba, Olubunmi Ojo, **Chikwe Ihekweazu**, Clement Peter Lasuba, Ali Ahmed Yahaya, Peter Nsubuga and Wondimagegnehu Alemu

JOURNAL/DATE OF PUBLICATION: **BMC Public Health. May 10, 2020.**

DOI: [20\(1\):600](#)

**PUBLICATION TITLE: *Epidemiology and case-control study of Lassa fever outbreak in Nigeria from 2018 to 2019***

**AUTHORS:** Oladipupo Ipadeola, Yuki Furuse, **Elsie Ilori, Chioma Dan-Nwafor**, Kachikwulu Akabike, **Anthony Ahumibe, Winifred Ukponu**, Lawal Bakare, **Gbenga Joseph**, Muhammad Saleh, Esther Muwanguzi, Adebola Olayinka, Geoffrey Namara, Dhamari Naidoo, **Akanimo Iniobong**, Michael Amedu, **Nkem Ugbogulu, Favour Makava, Olawunmi Adeoye, Chukwuemeka Uzoho, Chimezie Anueyiagu, Tochi Okwor, Nwando Mba, Adejoke Akano, Abiodun Ogunniyi, Amina Mohammed**, Ayodele Adeyemo, Dike Ugochukwu, Emmanuel Agogo, **Chikwe Ihekweazu**.

**JOURNAL/DATE OF PUBLICATION:** **J Infect.** May 2020.

**DOI:** [80 \(5\):578-606](#)

**PUBLICATION TITLE: *Human monkeypox – After 40 years, an unintended consequence of smallpox eradication***

**AUTHORS:** Karl Simpson, David Heymann, Colin Brown, John Edmunds, Jesper Elsgaard, Paul Fineb, Hubertus Hochreine, Nicole Hoff, Andrew Greeng, **Chikwe Ihekweazu**, Terry Jonesi.

**JOURNAL/DATE OF PUBLICATION:** **Vaccine**, May 2020

**PUBLICATION TITLE: *Emergency response to a cluster of suspected food-borne botulism in Abuja, Nigeria: challenges with diagnosis and treatment in a resource-poor setting***

**AUTHORS:** **Oyeladun Okunromade**, Dalhat Mahmood, Aminatu Makarfi Umar, Augustine Olajide Dada, Jamilu Nikau, Lamin Maneh, Okokon Ita Ita, Muhammad Balogun, Patrick Nguku, Olubunmi Ojo, **Chikwe Ihekweazu**.

**JOURNAL/DATE OF PUBLICATION:** **Pan African Medical Journal.** August, 2020.

**DOI:** [36:287](#)

**PUBLICATION TITLE: *Descriptive epidemiology of Lassa fever in Nigeria, 2012-2017***

**AUTHORS:** Onyebuchi Augustine Okoro, Eniola Bamigboye, **Chioma Dan-Nwafor**, Chukwuma Umeokonkwo, **Elsie Ilori, Rimamdeyati Yashe**, Muhammad Balogun, Patrick Nguku, **Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **Pan African Medical Journal.** September 03, 2020

**DOI:** [37:15.](#)

**PUBLICATION TITLE: *Using critical information to strengthen pandemic preparedness: the role of national public health agencies***

**AUTHORS:** Mishal Khan, Osman Dar, Ngozi Erondu, Afifah Rahman-Shepherd, Lara Hollmann, **Chikwe Ihekweazu, Okechukwu Ukandu**, Emmanuel Agogo, Aamer Ikram, Tayyab Razi Rathore, Ebere Okereke, Neil Squires.

**JOURNAL/DATE OF PUBLICATION:** **BMJ Global Health. September 2020.**

**PUBLICATION TITLE: *Descriptive Epidemiology of Coronavirus Disease 2019 in Nigeria, 27 February-6 June, 2020***

**AUTHORS:** Elimian Kelly, **Ochu Chinwe, Ilori Elsie, Oladejo John, Igumbor Ehimario, Steinhardt Laura, Wagai John, Arinze Chinedu, Ukpunu Winifred, Obiekea Celestina, Aderinola Olaolu, Crawford E, Olayinka Adebola, Dan-Nwafor Chioma, Okwor Tochi, Disu Yahya, Yinka-Ogunleye Adesola, Kanu NE, Olawepo OA, Aruna Olusola, Michael CA, Dunkwu L, Ipadeola Oladipupo, Naidoo Dhamari, Umeokonkwo CD, Matthias A, Okunromade Oyeladun, Badaru Sikiru, Jinadu Arisekola, Ogunbode Oladipo, Egwuenu Abiodun, Jafiya Abubakar, Dalhat Mahmood, Saleh Fatima, Ebhodaghe Blessing, Ahumibe Anthony, Yashe Rimamdeyati, Atteh Rhoda, Nwachukwu WE, Ezeokafor C, Olaleye D, Habib Z, Abdus-Salam I, Pembi E, John D, Okhuarobo UJ, Assad H, Gandi Y, Muhammad B, Nwagwogu C, Nwadiuto I, Sulaiman K, Iwuji I, Okeji A, Thliza S, Fagbemi S, Usman R, Mohammed AA, Adeola-Musa O, Ishaka M, Aketemo U, Kamaldeen K, Obagha CE, Akinyode AO, Nguku Patrick, **Mba Nwando, Chikwe Ihekweazu****

**JOURNAL/DATE OF PUBLICATION:**  
**Epidemiology & Infection, published by Cambridge University Press. September 2020**

**PUBLICATION TITLE : *Living with the COVID-19 pandemic: act now with the tools we have***

**AUTHORS:** Bedford J, Enria D, Giesecke J, Heymann DL, **Chikwe Ihekweazu**, Kobinger G, Lane HC, Memish ZA, Oh MD, Sall AA, Ungchusak K, Wieler LH; WHO Strategic and Technical Advisory Group for Infectious Hazards.

**JOURNAL/DATE OF PUBLICATION:** **Volume 396, Issue 10259, P1314-1316. October 24, 2020**

**PUBLICATION TITLE: *Research as a pillar of Lassa fever emergency response: lessons from Nigeria***

**AUTHORS:** Adebola Tolulope Olayinka, **Chioma Dan Nwafor, Adejoke Akano, Kamii Jan, Blessing Ebhodaghe, Kelly Elimian, Chinwe Ochu, Tochi Okwor, Oladipupo Ipadeola, Winifred Ukpunu, Ifeanyi Okudo, Clement Peter, Elsie Ilori, Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **Pan African Medical Journal. October 27, 2020**

**DOI:** [37:179](https://doi.org/10.1186/s13071-020-04087-0)

**PUBLICATION TITLE: *Exportation of Monkeypox virus from the African continent***

**AUTHORS:** Matthew Mauldin, Andrea McCollum , Yoshinori Nakazawa, Anna Mandra, Erin Whitehouse, Whitni Davidson, Hui Zhao, Jinxin Gao, Yu Li, Jeffrey Doty, **Adesola Yinka-Ogunleye, Afolabi Akinpelu**, Olusola Aruna, Dhamari Naidoo, Kuiama Lewandowski, Babak Afrough, Victoria Graham, Emma Aarons, Roger Hewson, Richard Vipond, Jake Dunning, Meera Chand, Colin Brown, Inbar Cohen-Gihon, Noam Erez, Ohad Shifman, Ofir Israeli, Melamed Sharon, Eli Schwartz, Adi Beth-Din, Anat Zvi, Tze Minn Mak, Yi Kai Ng, Lin Cui, Raymond Lin , Victoria Olson, Tim Brooks, Nir Paran, **Chikwe Ihekweazu**, Mary Reynolds.

**JOURNAL/DATE OF PUBLICATION:** **The Journal of Infectious Diseases. October, 2020**

**PUBLICATION TITLE: *Determination of the emergency phase for response against endemic disease outbreak: A case of Lassa fever outbreak in Nigeria.***

**AUTHORS:** Iyadeola Oladipupo, Furuse Yuki, de Gooyer Tanyth, **Dan-Nwafor Chioma**, Namara Geoffrey, **Ilori Elsie, Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **J Glob Health. December 2020; 10(2):020353**

**PUBLICATION TITLE: *Responding to a pandemic through social and behavior change communication: Nigeria's experience.***

**AUTHORS:** **Chinwe Lucia Ochu**, Oluwatosin Wuraola Akande, Vivianne Ihekweazu, Chijioke Kaduru, **Oreoluwa Akomolafe, Abiodun Egwuenu, Chimezie Anueyiagu**, Jeremiah Agenyi, Ukwori Ejibe, Yinka Falola-Anoemuah, Olayinka Umar-Farouk, Oyeronke Oyebanji, Babafunke Fagbemi, **Chukwuemeka Oguanuo, Tijesu Ojumu, Hadiza Saad, Tarik Mohammed, Yahaya Disu, and Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **Health Security. December 18, 2020**

**DOI:** <http://doi.org/10.1089/hs.2020.0151>

**PUBLICATION TITLE: *Nigeria's public health response to the COVID-19 pandemic: January to May 2020.***

**AUTHORS:** **Dan-Nwafor Chioma, Ochu Chinwe**, Elimian Kelly, **Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **J Glob Health. December 2020;10(2):020399.**

**DOI:** [10.7189/jogh.10.020399](https://doi.org/10.7189/jogh.10.020399)

**PUBLICATION TITLE: *Nigeria's efforts to strengthen laboratory diagnostics – Why access to reliable and affordable diagnostics is key to building resilient laboratory systems***

**AUTHORS:** Naidoo Dhamari and **Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **African Journal of Laboratory Medicine. 36:287, 2020.**

PUBLICATION TITLE : **Nigeria's public health response to the COVID-19 Pandemic: January to May 2020**

AUTHORS: **Chioma Dan-Nwafor, Chinwe Lucia Ochu, Kelly Elimian, John Oladejo, Elsie Ilori, Chukwuma Umeokonkwo, Laura Steinhardt, Ehimario Igumbor, John Wagai, Tochi Okwor, Olaolu Aderinola, Nwando MBA, Assad Hassan, Mahmood Dalhat, Kola Jinadu, Sikiru Badaru, Chinedu Arinze, Abubakar Jafiya, Yahya Disu, Fatima Saleh, Anwar Abubakar, Celestina Obiekea, Adesola Yinka-Ogunleye, Dhamari Naidoo, Geoffrey Namara, Saleh Muhammad, Oladipupo Ipadeola, Chinenye Ofoegbunam, Oladipo Ogunbode, Charles Akatobi, Matthias Alagi, Rimamdeyati Yashe, Emily Crawford, Oyeladun Okunromade, Everistus Aniaku, Sandra MBA, Emmanuel Agogo, Michael Olugbile, Chibuzo Eneh, Anthony Ahumibe, William Nwachukwu, Priscilla Ibekwe, Ope-Oluwa Adejoro, Winifred Ukponu, Adebola Olayinka, Ifeanyi Okudo, Olusola Aruna, Fatima Yusuf, Morenike Alex-Okoh, Temidayo Fawole, Akeem Alaka, Hassan Muntari, Sebastian Yennan, Rhoda Atteh, Muhammad Balogun, Ndadi Nasiya Waziri, Abiodun Ogunniyi, Blessing Ebhodaghe, Virgile Lokossou, Mohammed Abdulaziz, Bimpe Adebiyi, Akin Abayomi, Ismail Abudus-Salam, Sunday Omilabu, Lukman Lawal, Mohammed Kawu, Basheer Muhammad, Aminu Tsanyawa, Festus Soyinka, Tomi Coker, Olaniran Alabi, Tony Joannis, Ibrahim Dalhat, Mahesh Swaminathan, Babatunde Salako, Ibrahim Abubakar, Braka Fiona, Patrick Nguku, Sani H-Aliyu, Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **J Glob Health. December 2020;10(2):020399.**

DOI: [10.7189/jogh.10.020399](https://doi.org/10.7189/jogh.10.020399). PMID: 33274062

PMID: [33274062](https://pubmed.ncbi.nlm.nih.gov/33274062/)

PMCID: [PMC7696244](https://pubmed.ncbi.nlm.nih.gov/PMC7696244/)

PUBLICATION TITLE: **Systems thinking for health emergencies: use of process mapping during outbreak response**

AUTHORS: Kara Durski, Dhamari Naidoo, Shalini Singaravelu, Anita Shah, Mamadou Harouna Djingarey, Pierre Formenty, **Chikwe Ihekweazu, James Banjura, Benoit Kebela, Adesola Yinka-Ogunleye, Ibrahima-Soce Fall, Womi Eteng, Mohamed Vandi, Charles Keimbe, Anwar Abubakar, Abulazeez Mohammed, Desmond Williams, Margaret Lamunu, Sylvie Briand, Jean Claude Changa Changa, Etienne Minkoulou, Dan Jernigan, Demba Lubambo, Asheena Khalakdina, Ibrahim Mamadu, Ambrose Talisuna, Albert Mbule Kadiobo, Amara Jambai, Bruce Aylward, Michael Osterholm.**

JOURNAL/DATE OF PUBLICATION: **BMJ Global Health 2020; 5:e003901**

DOI: [10.1136/bmigh-2020-00390](https://doi.org/10.1136/bmigh-2020-00390)

PUBLICATION TITLE: **Africa's response to COVID-19**

AUTHORS: **Chikwe Ihekweazu and Emmanuel Agogo.**

JOURNAL/DATE OF PUBLICATION: **BMC Medicine. 2020.**

DOI: [18:151](https://doi.org/10.1186/s12881-020-0715-1)

**PUBLICATION TITLE: Human monkeypox - After 40 years, an unintended consequence of smallpox eradication**

**AUTHORS:** Karl Simpson, David Heymann, Colin S Brown, W John Edmunds, Jesper Elsgaard, Paul Fine, Hubertus Hochrein, Nicole A Hoff, Andrew Green, **Chikwe Ihekweazu**, Terry C Jones, Swaib Lule, Jane Maclennan, Andrea McCollum, Barbara Mühlemann, Emily Nightingale, Dimie Ogoina, **Adesola Ogunleye**, Brett Petersen, Jacqueline Powell, Ollie Quantick, Anne W Rimoin, David Ulaeato, Andy Wapling.

**JOURNAL/DATE OF PUBLICATION:** **Vaccine, Volume 38, Issue 33, 2020.**

**PAGES:** [5077-508](#)

**PUBLICATION TITLE: The reactive vaccination campaign against cholera emergency in camps for internally displaced persons, Borno, Nigeria, 2017: a two-stage cluster survey**

**AUTHORS:** Moise Chi Ngwa, James Agada Oche, Wondimagegnehu Alemu, Lorenzo Pezzoli, **Chikwe Ihekweazu**, David Sack.

**JOURNAL/DATE OF PUBLICATION:** **BMJ Global Health. 2020.**

**PUBLICATION TITLE 31: COVID-19: How a virus is turning the world upside down**

**AUTHORS:** Ilona Kickbusch, Gabriel M Leung, Zulfiqar A Bhutta, Malebona Precious Matsoso, **Chikwe Ihekweazu**, Kamran Abbasi.

**JOURNAL/DATE OF PUBLICATION:** **BMJ. 2020.**

**DOI:** [369:m1336](#)

**PUBLICATION TITLE: Patient characteristics associated with COVID-19 positivity and fatality in Nigeria: retrospective cohort study**

**AUTHORS:** Kelly Osezele Elimian, **Chinwe Lucia Ochu, Blessing Ebhodaghe**, Puja Myles, Emily E Crawford, Ehimario Igumbor, Winifred Ukponu, Adebola Olayinka, Olusola Aruna, **Chioma Dan-Nwafor**, Olatayo Ayodeji Olawepo, **Oladipo Ogunbode, Rhoda Atteh, William Nwachukwu**, Sudhir Venkatesan, Chijioke Obagha, Samuel Ngishe, **Kabir Suleiman**, Muhammad Usman, Hakeem Abiola Yusuf, Ifeoma Nwadiuto, Abbas Aliyu Mohammed, Rabi Usman, **Nwando Mba, Olaolu Aderinola, Elsie Ilori, John Oladejo**, Ibrahim Abubakar, **Chikwe Ihekweazu**

**JOURNAL/DATE OF PUBLICATION:** **BMJ Open 2020;10:e044079.**

**DOI:** [10.1136/bmjopen-2020-044079](#)

PUBLICATION TITLE: ***Identifying and Quantifying the Factors Associated with Cholera-related Death During the 2018 Outbreak in Nigeria***

AUTHORS: Kelly Osezele Elimian, Anwar Musah, **Chinwe Lucia Ochu**, Somto Mezue, **Oyeronke Oyebanji**, **Sebastian Yennan**, Ibrahima Soce Fall, Michel Yao, Martin Chukwuiji, Patrick Abok, Linda Haj Omar, Thieno Balde, Adamu Kankia, **Nanpring Williams**, Kitgakka Mutbam, Naidoo Dhamari, Ifeanyi Okudo, Wondimagegnehu Alemu, Clement Peter, **Chikwe Ihekweazu**

JOURNAL/DATE OF PUBLICATION: **Pan African Medical Journal. 2020**

DOI: [37:368](#)

PUBLICATION TITLE: ***Real-time metagenomic analysis of undiagnosed fever cases unveils a yellow fever outbreak in Edo State, Nigeria***

AUTHORS: Fehintola Ajogbasile, Oyewale Tomori, **Chikwe Ihekweazu**, Pardis Sabeti and Christian Happi.

JOURNAL/DATE OF PUBLICATION: **Nature Scientific Reports. 2020.**

DOI: [10:3180](#)

# 12 STAFF CAPACITY DEVELOPMENT IN 2020



## 12.1 Training and Workshops Attended by Staff

STAFF	TRAINING/ WORKSHOP	DATES
<b>Dr. Kola Jinadu</b> and <b>Dr. Lateefat Amao</b>	UK-Rapid Support Team Training in the UK	February 24–28, 2020
<b>Dr. Temidayo Fawole, Dr. Lateefat Amao</b> and Dr. Winifred Ukpunu ( <i>Georgetown University</i> )	WHO-AFRO Case Management Training on the Clinical Management of Patients with SARI associated with COVID-19 at Congo Brazzaville	March 16–20, 2020
<b>Fatima Bukar</b>	KOICA-YONSEI Fellowship on Capacity Building of Healthcare Professionals on Infectious Diseases using COVID-19 Test Kits (online)	July 14–27, 2020
<b>Dr. Isa Goni</b>	Weapons Convention National Preparedness Program for Nigeria	October 14–15, 2020
<b>Ms. Aisha Zaki</b>	Project Management training by Solina Project Management Training	August 11–13, 2020
<b>Pharm. Gbenga Joseph</b> and <b>Mr. Akeem Alaka</b>	Confidence-building Measures (CBM) Nigeria -NPP by the Biological Weapon Convention Division UNODA (online)	October 15, 2020
<b>Dr. Lateefat Amao</b> and <b>Dr. Gordon Igbodo</b>	Capacity Building of Healthcare Professionals on Infectious Diseases using COVID-19 Test Kits by the Korea International Cooperation Agency - KOICA (online)	July 14–27, 2020
LGA Disease Surveillance Notification Officers (DSNOs) and Health Facility surveillance focal persons	3rd Edition Integrated Disease Surveillance and Response (IDS) Training	October 1–December 10, 2020
<b>Dr. Olaolu Aderinola, Dr. Gordon Igbodo, Dr. Fahad Muhammad</b> and <b>Mr. Emmanuel Benyeogor</b>	GOARN Virtual Leadership Sense-Making' retreat workshop	September 28, 2020

12. STAFF CAPACITY DEVELOPMENT IN 2020

STAFF	TRAINING/WORKSHOP	DATES
<b>Dr. Gordon Igbodo, Dr. Fahad Muhammad and Mr. Emmanuel Benyeogor</b>	Good Governance Practices In a Pandemic by Africa CDC e-ITEC (Webinar)	August 6–7, 2020
<b>Chukwu Chimaobi, Ndodo Nnaemeka, Abdullahi IDris Nasir, Abel Anzaku Abbas, Achu Etta, Adaga Ene, Adebayo-gege Grace, Enyioma-Alozie Swesme, Igwe James, Isife Samuel, Musa Abdulmajid, Osawe Sophia and Sheriff Hamed</b>	PAN African Bioinformatics Training by African Society for Human Genetics, H3 Africa and Wellcome Trust	May 12 – August 6, 2020
<b>Dr. Ndodo Nnaemeka, Dr. Olusola Akanbi, Dr. Omoare Adesuyi, Chukwu Chimaobi, Kingsley Madubuike, Abdulmajid Musa, Nneamaka Uba, Eme Ekeng and Bamidele Oluwafemi</b>	Next Generation Sequencing and Use of IDCEQ Pipeline by Chan Zuckerberg Bio-hub	July 20, 2020 (commencement of weekly virtual meeting)
<b>Mr. Innocent Chigozie Okoli, Mr. Martins Olajide and Dr. Adesola Adeleye</b>	Biosafety Cabinet Field Certifier Accreditation Course by Public Health England	February 10–21, 2020
<b>Mrs. Nwando Mba, Mr. Anthony Okon, Mr. Afolabi Akinpelu, Dr. Emeka Ndodo, Dr. Sikiru Badaru, Mr. Abdulateef Abdulrahim, Mr. Anthony Ahumibe, Ekoh Aniefiok, Josephine Ogbazi, Mrs. Babatunde Olajumoke, Ene Adaga, Doofan Abaa and Adama Abubaka</b>	Laboratory Leaders One Day Strategic Alignment and Team Bonding Workshop by Public Health England	February 24, 2020
<b>Zayyanatu Nuru Jibrin, Ekene Osifo Rita, Michael Popoola and Eme Ekeng</b>	Laboratory Diagnosis of Diphtheria by Public Health England	March 3–6, 2020
<b>Dr. Sikiru Badaru and Ogarega Daudu</b>	Laboratory Leadership and Clinical Governance Workshop by Public Health England	March 16–20, 2020

12. STAFF CAPACITY DEVELOPMENT IN 2020

STAFF	TRAINING/ WORKSHOP	DATES
<b>Afolabi Akinpelu, Mangpin Leviticus, Maryam Sani Lawal, Bamidele Oluwafemi, Emmanuel Opara, Adeleye Adesola and Onyema Jessica</b> (Physical attendees)  <b>John Olaide, Onyibo Ijeoma Assumpta, Mojisola Muheebat Salaam, Olajide Martins, Abdulakeem Amoo, Ekene Rita Osifo, Aderoju Bukola Olabisi, Bernadette Ekwere, Aniefiok Ekoh, Josephine Ogbazi, Abdullateef Abdulrahim, Chimaobi Chukwu, Stanley Uche Ogbonna, Akinpelu Muftau Afolabi, Zacchaeus Adeniran Adejuyigbe, Sa'adatu Aliyu Abubakar, Zayyanatu Nuru Jibrin, Abaa Victor, Mfon James, Joy Momoand and Aderopo and Mathew Falaye</b> (Virtual attendees)	Biosafety Refresher and Risk Assessment training by Public Health England	August 31–September 3, 2020
<b>Emmanuel Opara Chidiebere, Ifeanyichukwu Amaechi, Deborah Effiong and Mary Uzoamaka Okoli</b>	COVID-19 Practical Concepts of Diagnostic Testing by Public Health England	June 11, 2020
51nos. NRL and CPHL staff	Class II Biological Safety Cabinet Training by Public Health England	June – December, 2020
<b>Oliha Osazemen, Amaechi Ifeanyichukwu Paul, Zacchaeus Adejuyigbe, Chimaobi Chukwu, Okoli Innocent Chigozie, Sunday Ejemete, Adewusi Adetunji Olutayo, Zayyanatu Nuru Jibrin, Okomayin Deborah, Elizabeth Obiosun, Erasogie Ebv uomwan, Ahmad Abubakar Adama, Emmanuel Ofana, Christopher Chukwu, Bamidele Oluwafemi and Ogarega Daudu</b>	Inauguration of NRL QT and training of quality team on use of laboratory data as Laboratory Quality Indicator by Public Health England	November 27–28, 2020

12. STAFF CAPACITY DEVELOPMENT IN 2020

STAFF	TRAINING/ WORKSHOP	DATES
<b>Deborah Effiong, Micheal Popoola, Zacchaeus Adejuyigbe, Chukwuma Okibe, Erasogie Evbuomwan, Abdulmajid Suleiman Musa, Ogarega Daudu, Afolabi Akinpelu, Adesola Adeleye, Bamgboye Iyabo, Innocent Okoli, Salaam Muheebat, Ekene Rita Osifo, Onyibo Ijeoma, Aderoju Bukola, Martins Olajide, Olajumoke Babatunde and Aniefiok Ekoh</b>	Handling and Care of Biosafety Cabinet and other Basic Laboratory Equipment by Public Health England	November 9–11, 2020 (NRL) November 12–14, 2020 (CPHL)
<b>Nkiruka Uzoeba and Leviticus Mangpin</b>	Biosafety and Biosecurity Training for Yellow Fever and COVID-19 Laboratory Network by Resolve to Save Lives and Institute of Human Virology	September 14–19, 2020
23 members of staff across departments	Scientific Writing Training by US-CDC	August 12–24, 2020
<b>Bukola Aderoju, Ijeoma Oyibo, Abdulateef Abdulrahim, Abdulakeem Amoo, Nkiruka Uzoeba and Stanley Ogbonna</b>	Strengthening Laboratory Management Towards Accreditation (SLMTA 3) Rollout in Nigeria-Cohort 8 by Resolve to Save Lives and Institute of Human Virology	November 9–14, 2020
<b>Anthony Ahumibe, Ogarega Daudu, Ifeanyichukwu Amaechi, Bamidele Oluwafemi, Chimaobi Chukwu, Opara Chidiebere, Micheal Popoola, Saadatu Abubakar, Adesuyi Omoare, Adesola Adeleye, Kingsley Madubuike, Afolabi Akinpelu, Aniefiok Ekoh and Bukola Adaroju</b>	Biosafety and Biosecurity Training by Islamic Development Bank	July 23–24, 2020
<b>Dr. Yahya Disu and Mr. Emeka Oguanuo</b>	Risk communication training on COVID-19 organised by Africa Centre for Disease Control	February 26–27, 2020
Directors and Rapid Response Teams	Introduction to Mobile Photography Tips	December 10, 2020

STAFF	TRAINING/WORKSHOP	DATES
<b>Dr. Everistus Aniaku, Dr. Rejoice Lukalawal, Dr. Usman Abdulkarim, Dr. Busayo Atenaga</b> , Prof. Sabitu A (ABU), and Dr. Erah Francis (ISTH)	Nigeria Public Health EOC Net Lecture series of 150 State frontline responders in Imo, Ekiti, Oyo, Adamawa, Akwa Ibom, Bauchi, Gombe, Rivers, Edo and FCT	September 16, 2020
<b>Mrs. Chidinma Chinnaka</b>	Use of African Volunteer Health Corps Network by Africa CDC	December 7–12, 2020
All new employees	NCDC Library Training Session	October 8-9, 2020
All staff	Microsoft Office Training	August 2020

## 12.2 Training and Workshops Facilitated by Staff

TRAINING/ WORKSHOP	ATTENDEES	FACILITATORS
Case Management of COVID-19 — February 24-26, 2020	43nos health care workers from Isolation and treatment centres: (Lagos – 7, Kano – 7, Enugu – 7, MODHIP – 5, FCT – 17, UATH – 14 and National Hospital – 3)	16 facilitators
Zonal RRT training	316 trainees in all six (6) geopolitical zones	<b>Mrs. Awodiji, Mrs. Chidinma Chinnaka, Dr. Odianosen, Dr. Ifeanyi Abali and Dr. Lateefat Amao</b>
States PHEOC training	175 state frontline responders in Imo, Ekiti, Oyo, Adamawa, Akwa Ibom, Bauchi and Sokoto states	<b>Dr. Everistus Aniaku, Dr. Rejoice Lukalawal, Dr. Mardiyya Isyaku, Dr. Usman Abdulkarim, Mr. Emmanuel Benyeogor, Mr. Anwar Abubakar, Mr. Akanimo Iniobong, Mr. Emmanuel Lucky, Dr. Erah Francis (ISTH) and Prof. Sabitu A (ABU)</b>

## 12. STAFF CAPACITY DEVELOPMENT IN 2020



• Dr. Kola Jinadu (top) and Dr. Lateefat Amao (bottom) at the UK-Rapid Support Team Training in the UK



Dr. Temidayo Fawole, Dr. Lateefat Amao and Dr. Winifred Ukponu (Georgetown University) at the WHO-AFRO Case Management Training on the Clinical Management of Patients with SARI associated with COVID-19 at Brazzaville, DR Congo

## 12. STAFF CAPACITY DEVELOPMENT IN 2020



Cohort 11, Cluster II of the Advanced Nigeria Field Epidemiology Training Programme (NFETP) after an interaction with the DG, NCDC



Participants at project management training supported by the Basic Healthcare Provision Fund

# 13 GUIDELINES DEVELOPED

>40 DISEASE GUIDELINES DEVELOPED IN 2020

The screenshot shows the official website of the Nigeria Centre for Disease Control (NCDC). At the top left is the Nigerian coat of arms and the NCDC logo. The top right features navigation links: Home, Courses, Profile, and Contact. The main title is "IPC COVID-19 ONLINE COURSE" in large, bold, black letters. Below it is a subtitle: "An introductory course on Infection Prevention & Control for COVID-19 targeted at healthcare workers". A URL is provided: <https://elearning.ncdc.gov.ng/courses/infection-prevention-and-control-for-covid-19/>. A red "SIGN UP" button is visible. A small video thumbnail at the bottom shows a classroom setting with students raising their hands. The text "GUIDELINES FOR SCHOOLS AND LEARNING FACILITIES REOPENING AFTER COVID-19 PANDEMIC CLOSURES" is overlaid on this thumbnail, along with the tagline "Taking Responsibility for Safe Schools and Quality Learning".

### 13. GUIDELINES DEVELOPED

1. COVID-19 Case Management Guidelines (four versions)
2. Code of Conduct for Members of National RRT
3. A first draft of the National Public Health Multi-Hazard Preparedness Plan
4. Supported and contributed to the development of a guideline on 'Strengthening Nigeria's Capacity for Effective Disaster Management' by the Federal Ministry of Humanitarian Disaster Management and Social Development
5. Contributed to the finalisation of the 'National Chemical and Biological Emergency Preparedness and Response Plan for Nigeria'
6. 240 COVID-19 SitReps published
7. COVID-19 outbreak response toolkit for state PHEOC
8. State PHEOC handbook
9. AMR Surveillance Guidelines
10. AMR Governance Manual
11. Bi-monthly AMR Newsletter
12. RCCE Strategy for COVID-19 Containment
13. Guidance for Risk Communication and Community Engagement at subnational Level
14. Guidance on How to Communicate
15. Integrated Rumour Management Strategy
16. Stigma Management Protocol
17. Rumour Management Protocol
18. Online IPC course with training modules
19. Development of IPC monitoring and audit tools in the context of COVID-19
20. COVID-19 preparedness checklist for health facilities
21. Tool for auditing Screening-Identification-Notification implementation across health facilities
22. Standard Operation Procedure for Specimen Collection, Packaging and Transportation for SARS-CoV-2 Testing
23. COVID-19 Laboratory Line List Reporting Form

### 13. GUIDELINES DEVELOPED

24. FAQs on COVID-19 Diagnostics
25. COVID-19 Laboratory Assessment Checklist
26. National COVID-19 Testing Strategy
27. Guidance for private sector laboratories in COVID-19 testing
28. Bacteriology Laboratory Assessment Checklist
29. Intra-state specimen transport Assessment Checklist
30. National reference laboratory biorepository COVID-19 biospecimen release policy and procedures
31. Guidance on quality assurance for COVID-19 molecular testing in Nigeria Centre for Disease Control network laboratories (in draft)
32. Standard operating procedure on internal quality assurance
33. Real-time Reverse Transcription Polymerase Chain Reaction for the Detection of SARS-CoV-2 using reaction for the detection of SARS-CoV-2 using
34. General procedure for manual extraction of SARS-CoV-2 nucleic acid from suspected coronavirus specimens SOP
35. Real-Time Reverse Transcription Polymerase Chain Reaction for the detection of SARS-CoV-2
36. Real-Time Reverse Transcription Polymerase Chain Reaction for the detection of SARS-CoV-2 using Liferiver COVID-19 Multiplex RT-PCR Kit SOP
37. Data management of SARS-CoV-2 results and COVID-19 activities at the NRL SOP
38. Specimen retrieval from NRL biorepository SOP
39. Job aids for viral nucleic acid extraction using automated extractors
40. Guideline for sample reception and result reporting for SARS-CoV-2 testing at the NRL
41. Schematic flow for receiving and processing suspected SARS-CoV-2 specimens and results reporting at the NRL
42. National COVID-19 Risk Communications strategy in collaboration with the Federal Ministry of Information and other partners
43. Guidelines for the safe reopening of the economy in collaboration with relevant government institutions and partners such as the Federal Ministry of Education etc.

## 13. GUIDELINES DEVELOPED

**Code of Conduct for Members of National Rapid Response Teams**

**GUIDELINES FOR SCHOOLS AND LEARNING FACILITIES REOPENING AFTER COVID-19 PANDEMIC CLOSURES**  
Taking Responsibility for Safe Schools and Quality Learning

**National Interim Guidelines for Clinical Management of COVID-19**  
VERSION 4, JULY 2020

**COVID-19 GUIDELINES ON RE-OPENING PLACES OF WORSHIP**

**National Strategy to Scale Up Access to Coronavirus Disease Testing in Nigeria**

**Risk Communication and Community Engagement Strategy**  
COVID-19 Prevention and Control in Nigeria

**CORONAVIRUS DISEASE COVID-19 Frequently Asked Questions**

**IPC COVID-19 ONLINE COURSE**  
An introductory course on Infection Prevention & Control for COVID-19 targeted at healthcare workers  
<https://elearning.ncdc.gov.ng/courses/infection-prevention-and-control-for-covid-19/>

# 14 PARTNERS



## 14.1 Government Partners



FEDERAL MINISTRY OF  
HEALTH



SENATE COMMITTEE ON PRIMARY  
HEALTHCARE AND COMMUNICABLE DISEASES



HOUSE COMMITTEE ON  
HEALTH CARE SERVICES



Federal Ministry of Education

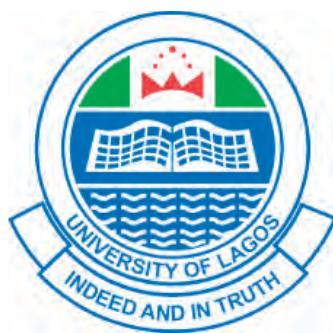


**MINISTRY OF DEFENCE**  
Federal Republic of Nigeria

*Protecting the Nation*



#### 14. PARTNERS



#### 14.2 Other Partners



United Nations



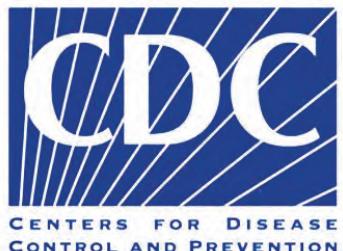
World Health Organization



WORLD BANK



European Union



14. PARTNERS



GEORGETOWN UNIVERSITY



14. PARTNERS



Korea International  
Cooperation Agency



Public Health Institutes of the World



ICRC

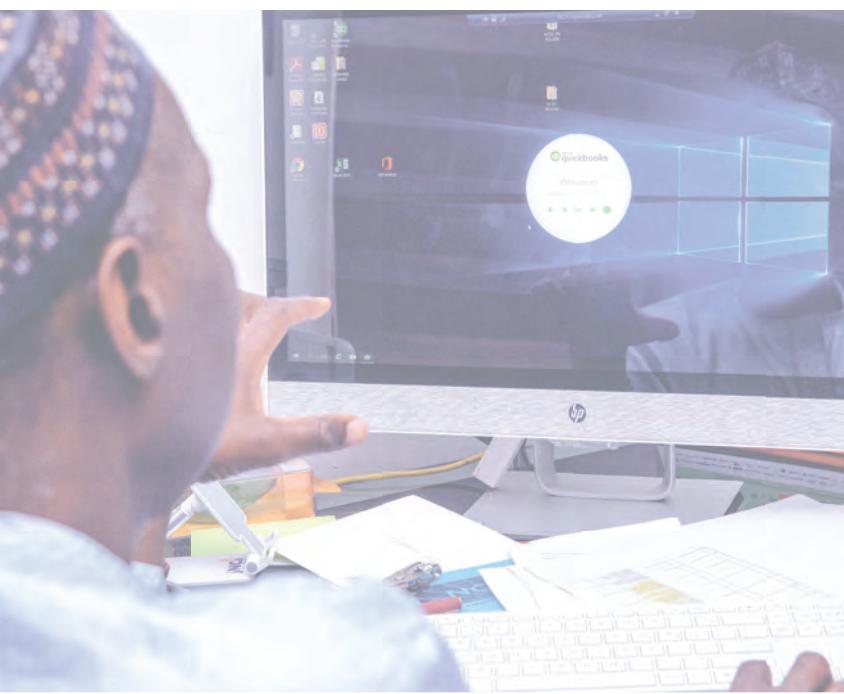


# ABBREVIATIONS AND ACRONYMS

<b>ACEGID</b>	African Centre of Excellence for Genomics of Infectious Diseases
<b>Africa CDC</b>	Africa Centres for Disease Control and Prevention
<b>AMR</b>	Antimicrobial Resistance
<b>BHCPF</b>	Basic Health Care Provision Fund
<b>BMGF</b>	Bill & Melinda Gates Foundation
<b>CSM</b>	Cerebrospinal Meningitis
<b>EAMS</b>	Electronic Archives Management System
<b>EOC</b>	Emergency Operations Centre
<b>EVD</b>	Ebola virus disease
<b>FCT</b>	Federal Capital Territory
<b>FETP</b>	Field Epidemiology Training Programme
<b>FIND</b>	Foundations for Innovative New Diagnostics
<b>FMARD</b>	Federal Ministry of Agriculture and Rural Development
<b>FMDA</b>	Federal Ministry of Environment
<b>FMoH</b>	Federal Ministry of Health
<b>FR</b>	Financial Regulations
<b>GIFMIS</b>	Government Integrated Financial Management
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>GOARN</b>	Global Outbreak Alert and Response Network
<b>HCAI</b>	Healthcare Associated Infections
<b>HGF</b>	Helmholtz Association of German Research Centres
<b>HZI</b>	Helmholtz Centre for Infection Research
<b>IANPHI</b>	International Association of National Public Health Institutes
<b>IAR</b>	Intra-Action Review
<b>ICC</b>	Incident Coordination Centre
<b>IDSR</b>	Integrated Disease Surveillance and Response
<b>IHR</b>	International Health Regulations
<b>IHVN</b>	Institute of Human Virology Nigeria
<b>ILMS</b>	Integrated Library Management System
<b>IMS</b>	Incident Management System
<b>IPC</b>	Infection Prevention Control
<b>IPPIIS</b>	Integrated Payroll and Personnel Information System
<b>ISTH</b>	Irrua Specialist Teaching Hospital
<b>ISO</b>	International Organization for Standardization
<b>ITSON</b>	Integrated Training for Surveillance Officers in Nigeria
<b>IVR</b>	Interactive Voice Response
<b>JEE</b>	Joint External Evaluation
<b>KOICA</b>	Korea International Cooperation Agency
<b>LGAs</b>	Local Government Areas
<b>MDA</b>	Ministries, Departments and Agencies
<b>M&amp;E</b>	Monitoring and Evaluation
<b>mSERS</b>	Mobile Strengthening Epidemic Response System
<b>NAFDAC</b>	National Agency for Food and Drug Administration and Control

## ABBREVIATIONS AND ACRONYMS

<b>NAIIS</b>	Nigeria HIV/AIDS Indicator and Impact Survey
<b>NCDC</b>	Nigeria Centre for Disease Control
<b>NCDCSCS</b>	Nigeria Centre for Disease Control Staff Cooperative Society Limited
<b>NFELTP</b>	Nigeria Field Epidemiology and Laboratory Training Programme
<b>NEMA</b>	National Emergency Management Agency
<b>NHF</b>	National Housing Fund
<b>NHIS</b>	National Health Insurance Scheme
<b>NiCaDe</b>	Nigeria Capacity Development for Preparedness and Response for Infectious Diseases
<b>NIMR</b>	Nigerian Institute of Medical Research
<b>NMPHPRP</b>	National Multi-hazard Public Health Preparedness and Response Plan
<b>NPHCDA</b>	National Primary Health Care Development Agency
<b>NRL</b>	National Reference Laboratory
<b>NTD</b>	Neglected Tropical Diseases
<b>NYSC</b>	National Youth Service Corps
<b>ODK</b>	Open Data Kit
<b>PCR</b>	Polymerase Chain Reaction
<b>PHE</b>	Public Health England
<b>PHEOC</b>	Public Health Emergency Operations Centre
<b>PSR</b>	Public Service Rules
<b>PTF</b>	Presidential Task Force on COVID-19
<b>RCCE</b>	Risk Communication and Community Engagement
<b>RDT</b>	Rapid Diagnostic Test
<b>REDISSE</b>	Regional Disease Surveillance Systems Enhancement
<b>RKI</b>	Robert Koch Institute
<b>RRTs</b>	Rapid Response Teams
<b>RSSH</b>	Resilient and Sustainable Systems for Health
<b>RTSL</b>	Resolve to Save Lives
<b>SERCB</b>	Subnational Emergency Preparedness and Response Capacity Building
<b>SDSNO</b>	State Disease Surveillance and Notification Officers
<b>SLMTA</b>	Strengthening Laboratory Management Toward Accreditation
<b>SMoH</b>	State Ministry of Health
<b>SORMAS</b>	Surveillance Outbreak and Response Analysis System
<b>TAC</b>	TaqMan Array Card
<b>TCs</b>	Treatment Centres
<b>TON</b>	The Orange Network
<b>TWG</b>	Technical Working Group
<b>US CDC</b>	US Centers for Disease Control and Prevention
<b>WAHO</b>	West Africa Health Organisation
<b>WARDS</b>	West Africa Regional Disease Surveillance
<b>WaSH</b>	Water, Sanitation and Hygiene
<b>WHO</b>	World Health Organization
<b>WHO/AFRO</b>	World Health Organization Regional Office for Africa





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