

NIGERIA CENTRE FOR DISEASE CONTROL ANNUAL REPORT 2018







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ABOUT NCDC







NCDC VISION

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



NCDC MISSION

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







PROFILE

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





Public Health Laboratory Services

Prevention and Programmes Coordination

Health Emergency Preparedness and Response

Surveillance and Epidemiology

Finance and Accounts
Administration and Human
Resources



FOREWORD

The Nigeria Centre for Disease Control (NCDC) Annual Report for 2018 draws the curtain on the progress that has been made in health security in Nigeria, in the first administration of President Muhammadu Buhari.

Significant progress has been made in addressing the country's health problems as demonstrated in this report, especially towards achievement of stronger health security- part of Sustainable Development Goal 3. We have put infectious disease prevention and control at a higher priority, improved coordination across partners working in this area, strengthened public health laboratory functions and emergency response. Importantly, the Government of Nigeria has shown strong political commitment for health by signing the Bill establishing the NCDC into an Act.

The aim of this report is to share our contribution to global health security with other government, United Nations (UN) agencies, other partners and the general public. As host of the ECOWAS Regional Centre for Disease Control, we recognise that Nigeria through her national public health institute must play an exemplary role.

The 2018 programmes of the NCDC were based on the strategic priorities the agency identified in the NCDC 2017-2021 Strategy Plan. They were also fully aligned with the priorities of the National Health Strategic Development Plan. We are proud that the health sector of Nigeria is showing leadership in the coordination of other sectors involved in ensuring health security. This is especially evident in the development of the National Action Plan for Health Security developed by NCDC.

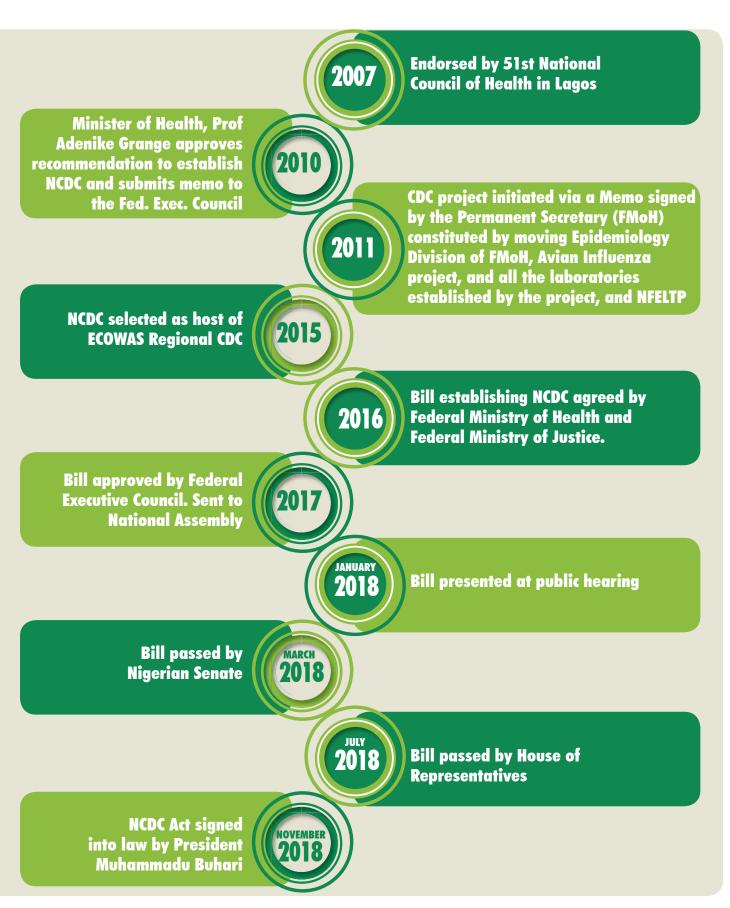
Despite the progress being made, there still remains challenges to be addressed to reach our goal of a healthy and safe Nigeria, free from the threat and occurrence of infectious disease outbreaks. The Federal Ministry of Health through NCDC as our agency will continue its efforts to address these together with its partners.

I would like to take this opportunity to express my sincere thanks and gratitude to all government counterparts, UN agencies especially the World Health Organisation and UNICEF, international partners and NCDC staff who have continuously worked throughout the year to record these achievements. We look forward to similar progress in the forthcoming years.

Latern

PROF. ISAAC F. ADEWOLE, FAS, FSPSP, FRCOG, DSc. (Hons) Honourable Minister of Health

NCDC BILL TIMELINE



LEADERSHIP OF THE FEDERAL MINISTRY OF HEALTH



"We are gathered to fulfill the promise of the Federal Republic of Nigeria to provide a befitting building for the #ECOWASRCSDC." ~ Hon. Minister of State @Fmohnigeria, Mr. Osagie Ehanire.

"Over the last two years, NCDC has focused on strengthening the health security of the country. We now have a fully operational National Reference Laboratory and we have established an Incident Coordination Centre, which serves as an Emergency Operations Centre during outbreaks."

PROF. ISAAC FOLORUNSHO ADEWOLE
Honourable Minister of Health

"We are gathered to fulfill the promise of the Federal Republic of Nigeria to provide a befitting building for the #ECOWASRCSDC."

DR. OSAGIE EHANIREHonourable Minister of State for Health



EXECUTIVE SUMMARY

"If you're walking down the right path and you're willing to keep walking, eventually you'll make progress." – Barack Obama

These words from former US President, Barack Obama continue to inspire us at the Nigeria Centre for Disease Control (NCDC) as we strengthen our efforts and capacity to protect the health of Nigerians.

In 2017, we restarted the process for the passage of the Bill establishing the NCDC. Our young parastatal had existed for about seven years, albeit without full legislative backing. In December 2018, the Bill was signed into an Act by the President of the Federal Republic of Nigeria. The political commitment from the Executive and Legislative arms of Government shows a recognition of the importance of the work we do, something we are extremely grateful for. The new Act provides us with a stronger backing to protect the health of all Nigerians.

Our new National Reference Laboratory is gradually taking its position as the hub of public health diagnosis in Nigeria. One of our biggest wins in the last year, has been revamping and strengthening this laboratory in Abuja and its sister campus in Lagos - the Central Public Health Laboratory. One of the biggest criticisms that we have received has been our inability to diagnose specific diseases in Nigeria and having to send samples to laboratories outside Nigeria. Currently, we have in-country capacity to test for all epidemic prone diseases in the country: Monkeypox, yellow fever, measles, cholera, Lassa fever and meningitis. We have also added the Virology Centre at the Federal Teaching Hospital Abakaliki – to our network of Viral Haemorrhagic Fever (VHF) laboratories.

Our work to strengthen diagnostic capacity would have been impossible without the support of our partners at the World Health Organisation (WHO), Public Health England (PHE) and the US Centers for Disease Control (US CDC). The National Reference Laboratory also served as the central laboratory for the Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) which was led by our sister agency, National Agency for the Control of AIDS (NACA). This is a remarkable example of collaboration to ensure government ownership and sustainability to strengthen health systems. But, there is still much work to be done, especially in getting the 2km stretch of road to the laboratory fully tarred.

When we began, we relied on paper and Excel based reporting for receiving most of our surveillance data from the states. In aligning with global best practice, Nigeria is joining the rest of the world to digitalise its operations. Relying on Excel was a difficult situation where sometimes, reports came in either very late or incomplete. In some cases, this affected response activities. To move forward, we began the digitisation of our surveillance system using a system called Surveillance and Outbreak Response Management System (SORMAS). With SORMAS, we have an application that provides case-based reporting for epidemic prone diseases. We have deployed this tool in all Local Government Areas in 11 states across the country. In addition to SORMAS, we use 'Tatafo' and SitAware; for incident management and event-based surveillance while Mobile Strengthening Epidemic Response Systems

"Ultimately, we are building a strong national public health institute that can effectively protect the health of Nigerians."

(mSers) is used for aggregate reporting. We are very grateful to our partners at the German HZI, PHE and University of Maryland, Baltimore for supporting the development and roll out of these tools. Many other national public health institutes have moved to digital tools for surveillance – and we are right up there with them.

Our emergency operations coordination has greatly improved. We now have a National Incident Coordination Centre (ICC) coordinating outbreak preparedness response activities in Nigeria at NCDC. With perseverance from our team at NCDC, we have also began the roll out of state Public Health Emergency Operations Centres (PHEOC). As at the end of 2018, we had provided PHEOCs in 11 states. It has been an interesting learning process for us and we hope with this, states in Nigeria become better prepared and structured for outbreak response. We are grateful to the Bill & Melinda Gates Foundation for their support for this project.

We continue to aggressively build the workforce for health protection in Nigeria. Together with the Irrua Specialist Teaching Hospital, we trained over 500 health care workers across all the regions of Nigeria on the prevention, detection and control of Lassa fever.

At NCDC, we have started an aggressive research programme, supported by WHO to gain a better understanding of the drivers of the disease, which will help us improve our response.

There have been several other successes for us including our successful coordination of the antimicrobial resistance (AMR) response, the aggressive public health communications campaign we have begun, capacity building of the NCDC team and a greater responsibility and contribution to the global health space. Nigeria is now officially a member of the Global Health Security Agenda (GHSA) countries and the Global Outbreak and Response Network (GOARN). We have received incredible support from several partners, as we build more trust and confidence in our work.

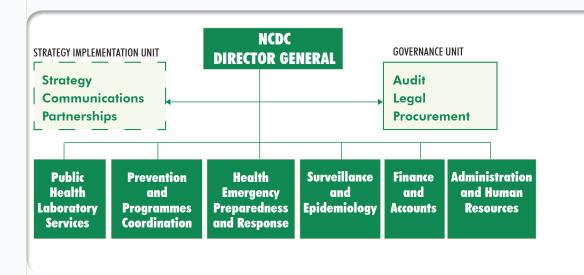
There is no doubt that the last one year has been an extremely busy, but fulfilling one for us at NCDC. We hope you enjoy reading our annual report that covers activities from January – December 2018.

We recognise that we still have areas to improve on and continue working towards this. Ultimately, we are building a strong national public health institute that can effectively protect the health of Nigerians.

Chikwe _ bekweazu
DR CHIKWE IHEKWEAZU

Director General, Nigeria Centre for Disease Control February 2019

HOW WE WORK



SURVEILLANCE AND EPIDEMIOLOGY

This department collects, collates and analyses data on priority diseases from the 36 states and FCT to detect outbreaks and inform policy. This is done primarily through the Integrated Disease Surveillance and Response (IDSR) strategy, an event based surveillance system. The team implements the International Health Regulation (IHR) cross-border coordination, verification, and notification, ensuring the health security of the country.

IMPLEMENTS
IHR, CROSS-BORDER
COORDINATION,
VERIFICATION, AND
NOTIFICATION

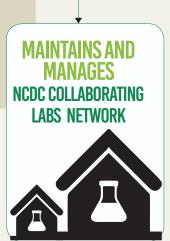


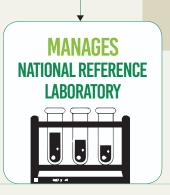




PUBLIC HEALTH LABORATORY SERVICES

This department manages the national reference laboratories – the National Reference Laboratory (NRL) Abuja and Central Public Health Laboratory (CPHL) Lagos. The department maintains and manages the network of NCDC collaborating laboratories, spread across regions of the country.

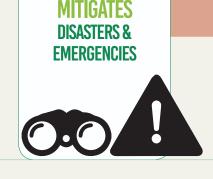




HEALTH EMERGENCY PREPAREDNESS AND RESPONSE

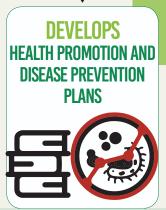
This department is responsible for the mitigation of disasters and emergencies as well as the management of its impact. The team also leads or supports outbreak response activities, including the deployment of Rapid Response Teams (RRTs).





PREVENTION AND PROGRAMMES COORDINATION

This department develops health promotion and disease prevention plans which address priority endemic infectious diseases and public health threats. The department conducts research to inform policies and make evidence-based practice the foundation of all programmes.





ADMINISTRATION AND HUMAN RESOURCES

This department has the responsibility of ensuring smooth and effective management of human and material resources of the agency.

MANAGES HUMAN AND MATERIAL RESOURCES





FINANCE AND ACCOUNTS

This department is charged with the responsibility of ensuring accountability, transparency, and probity in the course of providing financial and accounting services on behalf of the agency.

ENSURES ACCOUNTABILITY



PROVIDES FINANCIAL AND ACCOUNTING SERVICES



1.1 Technical Working Groups

The Technical Working Groups (TWGs) exist to provide focus on the prevention, detection, surveillance and monitoring of the six epidemic prone diseases and other priority public health issues.

The groups meet weekly, monitor trends of cases, develop and review guidelines, communication materials and other preparedness activities. During outbreaks, these groups are escalated to Emergency Operations Centres.



MONKEYPOX



LASSA FEVER



YELLOW FEVER



MENINGITIS



MEASLES



CHOLERA



INFLUENZA



ANTIMICROBIAL RESISTANCE



IHR



EBOLA PREPAREDNESS



SUMMARY OF OUTBREAKS AND RAPID RESPONSE TEAM DEPLOYMENTS: JAN - DEC 2018



For nearly every week in 2018, NCDC had Rapid Response Teams (RRTs) deployed to support states. Between January and December 2018, the Nigeria Centre for Disease Control supported 21 states, in responding to various disease outbreaks. There were 51 deployments of RRTs to states.

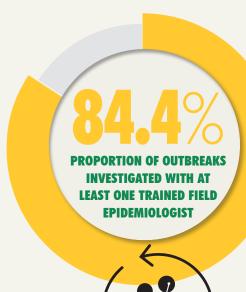
Zamfara State had the highest number of outbreaks (5) supported by NCDC. Adamawa, Bauchi, Edo and Katsina states received support for 4 outbreaks each. For these outbreaks, NCDC RRTs deployed for three different diseases per state. The average number of days per deployment was 8.9 days with the number of days (range 3-28 days). Proportion of outbreaks investigated with at least one trained field epidemiologist was 84.4% (38 of 45).

The NCDC continues to provide support for infectious disease preparedness, surveillance and response in the North-East. This is part of the Federal Government's efforts to rebuild the North-East following the insurgency and humanitarian crisis.

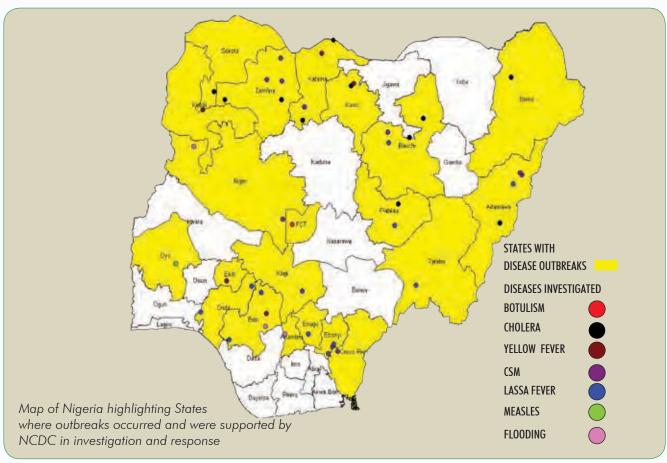
NUMBER OF STATES
SUPPORTED IN
RESPONDING TO
VARIOUS DISEASE
OUTBREAKS

51 NUMBER OF DEPLOYMENTS OF RRTs TO STATES DAYS

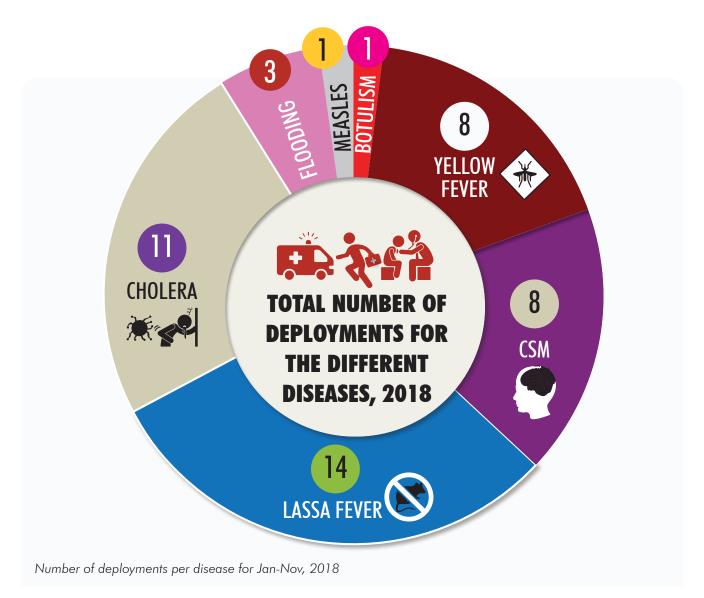
Average number of days per RRT deployment (range 3-28 days)

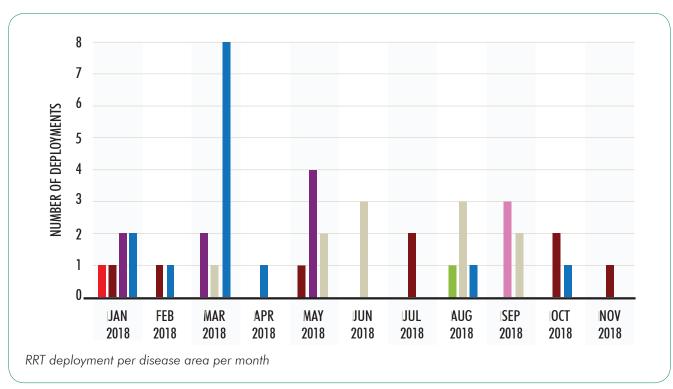












SIGNIFICANT ACCOMPLISHMENTS IN 2018

3.1 Department of Disease Surveillance and Epidemiology

Collects, collates and analyses data on priority diseases using the Integrated Disease Surveillance and Response (IDSR) strategy.



3.11 Launch of National Action Plan for Health Security (NAPHS)

Following the Joint External Evaluation (JEE) of International Health Regulations (IHR) in 2017, Nigeria developed a National Action Plan for Health Security (NAPHS). This was coordinated by NCDC as the IHR national focal point of Nigeria. The NAPHS was launched by the Honourable Minister of Health Professor Isaac Adewole, in December 2018. This framework is an important output from the Joint External Evaluation of IHR capacities in 2017, and will guide NCDC's coordination of the multiple sectors responsible for health security activities.



NAPHS launch

3.12 Establishment of National Surveillance Technical Working Group

In 2018, a national surveillance Technical Working Group was established involving all the relevant stakeholders and partners. This includes vertical programmes across the Federal Ministry of Health as well as other national and international partners. This group will support NCDC's vision to support disease control programmes in Nigeria with the relevant data for response activities in line with the NCDC Act, and ensure improved communication between the agency and other programmes.

3.13 Integrated Training for Surveillance Officers in Nigeria (ITSON)

In 2018, NCDC commenced a project to harmonise surveillance training modules delivered to surveillance officers at the Local Government and State levels in Nigeria. This includes modules from the frontline epidemiology programme, West African Regional Disease Surveillance (WARDS) programme, IDSR training, SORMAS training etc. The new ITSON programme also includes modules on infection prevention and control (IPC), Emergency Operations Centre (EOC) as well as digital surveillance activities.



ITSON harmonisation meeting

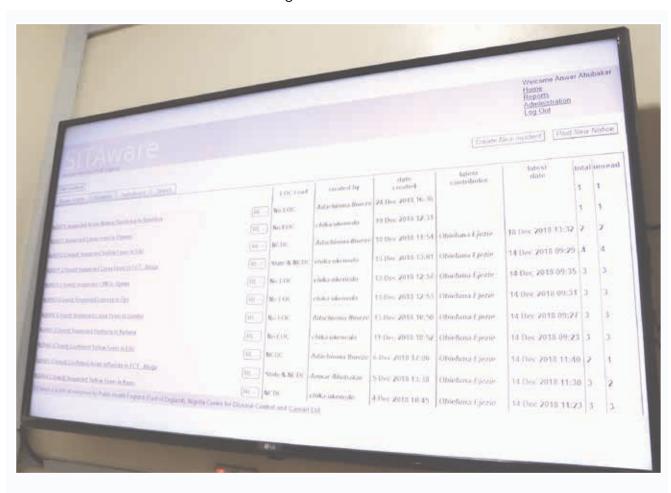
3.14 Digital Surveillance Tool – Surveillance and Outbreak Review Management System (SORMAS)

SORMAS was adopted in 2017 in Nigeria, and has been fully deployed in 194 Local Government Areas (LGAs) in 11 States. It has also been deployed albeit not fully, in 17 other LGAs across five States. In 2018, an updated version was introduced.



3.15 Launch of SITAware

With support from Public Health England, a SITAware tool was introduced. The tool is used as an incident logging system developed for early real time reporting and notification of outbreaks among NCDC staff.



3.16 One Health Strategy Plan

The One Health strategy plan was finalised with input and collaboration across the agency and with relevant stakeholders. This was supported by the Global Implementation Solutions in the US. The One Health strategy plan defines the role of various partners-especially in the health, animal health and environmental sectors – in the prevention, detection and control of infectious diseases in Nigeria.

3.17 Animal Surveillance for Zoonotic Diseases

For the first time, in collaboration with the US CDC and counterparts at the Federal Ministry of Agriculture and Rural Development, we began rodent and small animal trapping. The goal was to understand the epidemiology of the monkeypox virus in animals in Cross River and Edo States. Results are currently being analysed to inform our response. Samples collected will also be tested for the Lassa fever virus. When Nigeria recorded its first case of monkeypox after 40 years in 2017, there was sparse evidence on the disease reservoir. This activity is part of the approach by NCDC to improve knowledge of the disease and guide control activities.

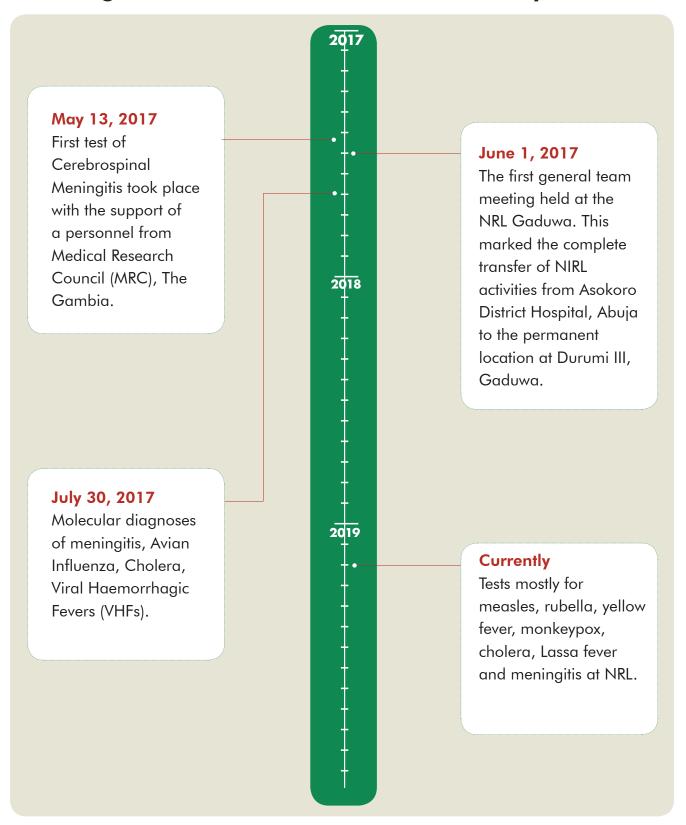


3.2 Department of Laboratory Services

The Department leads the diagnosis of public health diseases in Nigeria through the National Reference Laboratory (NRL) and network of public health laboratories.



3.21 Progress of the National Reference Laboratory



3.22 Central Laboratory for National HIV/AIDS Indicator and Impact Survey (NAIIS)

The National Reference Laboratory was selected to serve as the central laboratory for Nigeria's largest HIV/AIDS indicator survey. This requires the testing of samples from satellite laboratories across the country, and storage of these samples in a large biorepository. The Nigerian government has shown exemplary leadership of this survey, through the strong collaboration between the National Agency for the Control of AIDS (NACA) and NCDC.



NAIIS Bio-Repository at Gaduwa

3.23 Infrastructure Improvement

The Central Public Health Laboratory, a campus of the National Reference Laboratory was renovated and wears a new look in its central location in Yaba, Lagos. The laboratory continues to lead on measles, yellow fever, meningitis and cholera diagnosis for the Southern region of the country.









Before and After: CPHL, Yaba Lagos

Part of the road leading to the National Reference Laboratory was repaired for ease of movement.

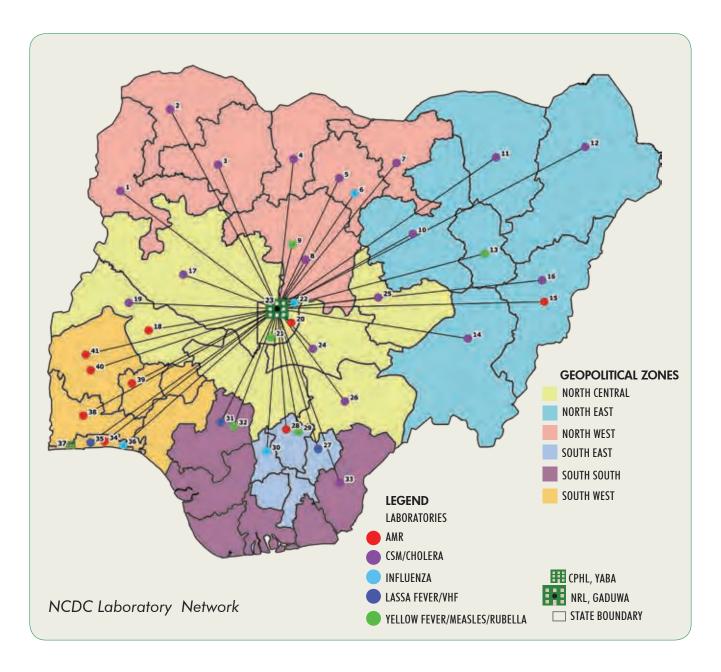




Before and After: Gaduwa Road, Abuja

3.24 Network of Public Health Laboratories

Across the country, the network of public health laboratories has been strengthened and better defined for epidemic prone diseases. These laboratories have been supported with reagents, supplies and training opportunities to ensure a strong system and link with the National Reference Laboratory. A Memorandum of Understanding (MOU) was signed among the Lassa fever laboratories. This has largely been supported by the World Health Organization (WHO) and Resolve To Save Lives (RTSL).



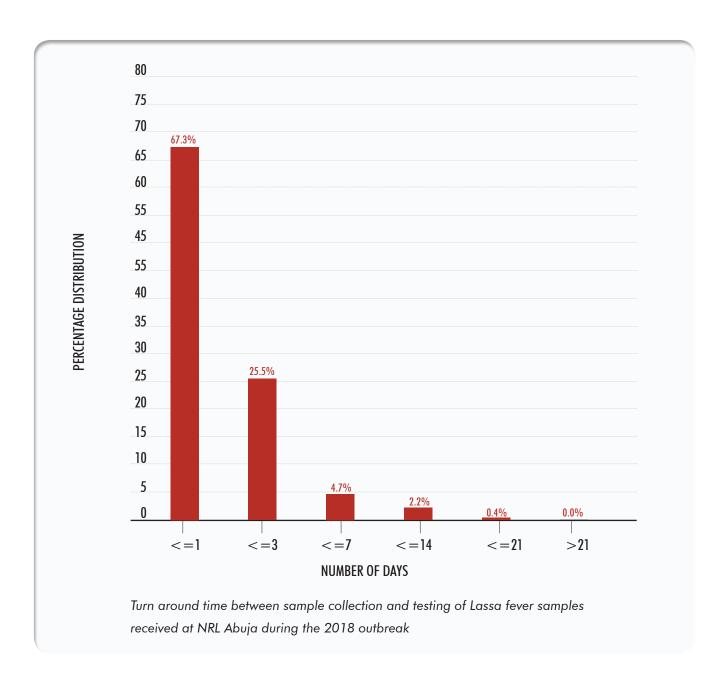
NCDC Laboratory Network

	NAME	STATE	CLUSTER	REF ID
1	Lagos University Teaching Hospital (LUTH)	Lagos	Lassa/VHF	35
	Virology Laboratory, Idiaraba			
2	Irrua Specialist Teaching Hospital, Irrua	Edo	Lassa/VHF	31
3	Federal Teaching Hospital, Abakaliki	Ebonyi	Lassa/VHF	27
4	NCDC National Reference Laboratory (NRL), Gaduwa, Abuja	FCT	Yellow Fever/Measles/Rubella, CSM/Cholera, Lassa/VHF, Influenza, Monkeypox	23
5	Lagos University Teaching Hospital (LUTH), Microbiology Laboratory, Idiaraba	Lagos	AMR	34
6	University of Nigeria Teaching Hospital (UNTH), Enugu	Enugu	AMR	28
7	National Hospital, Abuja	FCT	AMR	20
8	Obafemi Awolowo University Teaching Hospital, Ile-Ife	Osun	AMR	39
9	Babcock University Teaching Hospital, Ilishan-Remo	Ogun	AMR	38
10	University College Hospital, Ibadan	Оуо	AMR	41
11	Ladoke Akintola University Teaching Hospital, Ogbomosho	Оуо	AMR	40
12	University of Ilorin Teaching Hospital, Ilorin	Kwara	AMR	18
13	Federal Medical Centre, Jalingo	Taraba	AMR	15
14	Central Public Health Laboratory (CPHL), Yaba	Lagos	YF/Measles/Rubella,CSM/ Cholera	37
15	Yusuf Dantsoho Hospital, Kaduna	Kaduna	Yellow Fever/Measles/ Rubella	9
16	State Specialist Hospital, Gombe	Gombe	Yellow Fever/Measles/ Rubella	13
17	Maitama District Hospital, Abuja	FCT	Yellow Fever/Measles/ Rubella	21
18	Cross River General Hospital, Calabar	Cross River	CSM/Cholera	33
19	Plateau General Hospital, Jos	Plateau	CSM/Cholera	25
20	Abubakar Tafawa Balewa Teaching Hospital, Bauchi	Bauchi	CSM/Cholera	10

	NAME	STATE	CLUSTER	REF ID
21	Infectious Disease Hospital, Kano	Kano	CSM/Cholera	5
22	Yusuf Dantsoho Hospital, Kaduna	Kaduna	CSM/Cholera	8
23	State Public Health Laboratory, Katsina	Katsina	CSM/Cholera	4
24	University of Maiduguri Teaching Hospital, Maiduguri	Borno	CSM/Cholera	12
25	General Hospital, Damaturu	Yobe	CSM/Cholera	11
26	Ahmad Sani Yariman Bakura Specialist Hospital, Gusau	Zamfara	CSM/Cholera	3
27	Public Health Laboratory, Sokoto	Sokoto	CSM/Cholera	2
28	General Hosptial, Lafia	Nasarawa	CSM/Cholera	24
29	General Hospital, Ilorin	Kwara	CSM/Cholera	19
30	General Hospital, Yola	Adamawa	CSM/Cholera	16
31	State Specialist Hospital, Jalingo	Taraba	CSM/Cholera	14
32	General Hospital, Minna	Niger	CSM/Cholera	17
33	Federal Medical Centre, Makurdi	Benue	CSM/Cholera	26
34	Rasheed Shekoni Specialist Hospital, Dutse	Jigawa	CSM/Cholera	7
36	Sir Yahaya Memorial Hospital, Birnin Kebbi	Kebbi	CSM/Cholera	1
37	Nnamdi Azikiwe University Teaching Hospital, Nnewi (Sentinel Site)	Anambra	Influenza	30
38	Lagos State University Teaching Hosptial (LASUTH), Ikeja (Sentinel Site)	Lagos	Influenza	36
39	Aminu Kano Teaching Hospital, Kano (Sentinel Site)	Kano	Influenza	6
40	Asokoro District Hospital, Abuja (Sentinel Site)	FCT	Influenza	22
41	University of Nigeria Teaching Hospital (UNTH), Enugu	Enugu	Yellow Fever/Measles/ Rubella	29

3.25 New Sample Transportation System

In April 2018, NCDC introduced a new sample transportation system. This ensures rapid movement of samples from state capitals through a private courier system, to public health laboratories working with NCDC. In 2018, nearly 1,000 samples were transported across the country. This has improved the time-lag between collection of samples, transfer, testing and results which has an impact on response activities.



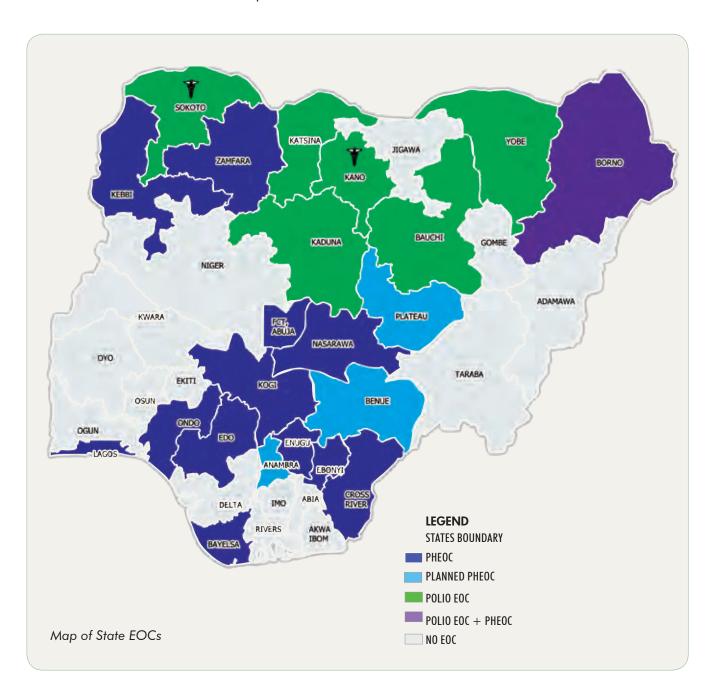
3.3 Department of Health Emergency Preparedness and Response

Manages Preparedness, Response, Supply chain and Logistics functions of the agency.



3.31 Establishment of State Public Health Emergency **Operations Centres (PHEOCs)**

In 2018, with support from the Bill & Melinda Gates foundation and the West African Health Organization (WAHO), NCDC began a project to establish state level PHEOCs. This has now been completed in 11 states.



3.32 Simulation Exercises

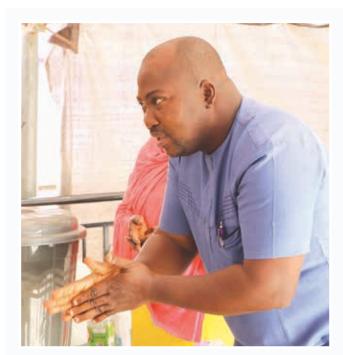
For the first time, NCDC conducted simulation exercises as part of preparedness functions. With support from WAHO, a large simulation exercise on yellow fever was held in Lagos State. With support from Public Health England and WHO, two simulation exercises were carried out to test the recently developed Infectious Diseases Outbreak Preparedness and Response plan and operations of the state EOCs.



Yellow Fever Simulation Exercise

3.33 Rapid Response Team Development and Strengthening

The Department led the development of a national rapid response training manual to guide the deployment of RRTs. Two groups of national RRTs were also trained.







RRT handwash and training

3.34 Establishment of National First Responders Team (N-FIRST)

Leveraging on the lessons learnt from the 2014 Ebola outbreak in Nigeria, NCDC established a National First Responders Team (N-FIRST) in 2018. This team is expected to be on alert and ready for deployment, in the event of a highly pathogenic infectious disease outbreak such as Ebola. They include medical doctors, pathologists, laboratory scientists and other professionals. In addition to the establishment of the N-First, there were training opportunities within and outside Nigeria. This is similar to the Emergency Medical Team (EMT) concept as introduced by WHO.



Nigeria's N-FIRST





N-FIRST in training at the Infectious Disease Hospital, Yaba

3.35 Medical Countermeasures (MCM) Plan

With support from the United States Centers for Disease Control and working closely with relevant stakeholders from Ministries, Departments and Agencies (MDAs) of the Government of Nigeria, NCDC coordinated the development of a national Medical Countermeasures (MCM) plan for the country. This plan guides the deployment of medical countermeasures during public health emergencies and disasters, as well as the role of the various government agencies with this responsibility.



3.4 Department of Prevention and **Programmes Coordination**

Develops health promotion and disease prevention plans which address priority endemic infectious diseases



3.41 Antimicrobial Resistance (AMR) Surveillance and **Awareness**

The NCDC continues to lead the surveillance of AMR in Nigeria. NCDC led the commemoration of the 2018 World Antibiotics Awareness Week in Nigeria. This included an awareness walk, spelling bee competition for secondary schools, an AMR policy dialogue, as well as television and radio appearances.

The NCDC set up a national One Health coordination mechanism for AMR surveillance; held two national AMR-TWG meetings and enrolled laboratories in the global External Quality Assurance (EQA). Nigeria submitted AMR data to the Global surveillance system for the first time.







AMR Week activities

3.42 New National Risk Communications Working Group

A multi-sectoral risk communication technical working group was formed. The group conducted a situation analysis and developed an all hazards risk communications plan to support communications during public health crises.



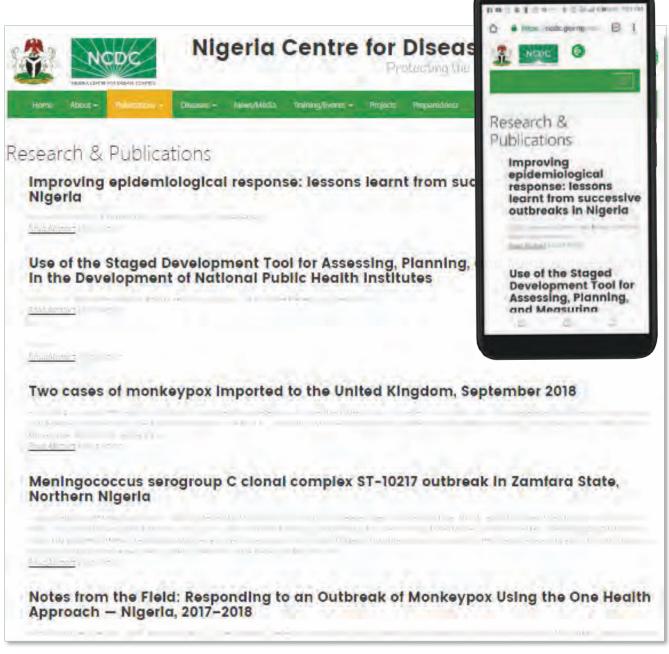




Risk Communications activities

3.43 New Research, Training and Knowledge Management (RTKM) Unit

In line with the NCDC strategy, the department has activated a new knowledge management and learning unit for the agency. The aim is to build a critical mass of trained NCDC staff, epidemiologists and health workforce in the country. The unit will also support the conduct of research needed to inform evidence-based policies and practice.



3.44 Improvement of Infection Prevention Control (IPC) Measures

Working with the Robert Koch Institut (RKI), we began a project to improve IPC outcomes in health facilities. Through the project, a national technical working group for IPC was created, a harmonised national manual was developed and frontline health care workers were also trained.







3.5 Department of Administration and Human Resources

Public health administration professionals manage all aspects of the public health organisation, which includes the oversight of budgets, programs, staff among many others



3.51 Recruitment of New Staff

In the year under review, the Department of Administration managed the intake of some new members of staff into the agency, following approval from the Office of the Head of Service. The increase in staff strength to 231 will enable the agency to continue working towards the delivery of its mandate.

All members of staff are also now included in the Integrated Payroll and Personnel Information System (IPPIS) of the Government of Nigeria.





3.52 Infrastructure Development

Well planned and adequate infrastructure is important in the delivery of our functions. The agency acquired new vehicles, completed the renovation of the Central Public Health Laboratory (CPHL) and the road leading to the National Reference Laboratory (NRL) in Gaduwa.





New vehicles





Renovation works at CPHL, Yaba Lagos





Road works at NRL Gaduwa Road, Abuja

3.53 Staff Welfare

All work and no play! The Department organised the establishment of a sports club and cooperative society for members of staff.







NCDC at Walk-the-Talk event organised by WHO

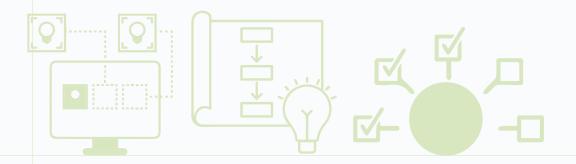
3.54 Staff Vaccination Exercise

In 2018, we began a programme to provide all staff with the vaccines required to protect them against infectious diseases. All staff in our Lagos and Abuja campuses were vaccinated against meningitis and yellow fever.



4

NEW PROJECTS IN 2018



REDISSE

A \$90m credit by the World Bank to address systemic weaknesses within the human and animal health sectors. Implemented in

Implemented in collaboration with Federal Ministry of Agriculture

States Public Health Emergency Operations Centre Establishment

Focused on establishing state level EOCs and training state staff on incident management capacities and its utilisation. Implemented with support from the Bill & Melinda Gates
Foundation

FIVE NEW PROJECTS IN 2018

Alliance for Epidemic Preparedness and Response (A4EPR)

Innovative platform
for private sector
engagement, by the
Private Sector Health
Alliance of Nigeria (PHN)
and NCDC. Launched by
Honourable Minister of
Health.

IHR Strengthening

Focused on strengthening emergency preparedness, resilience and response, enhancing national surveillance systems and public health laboratory networks.

Implemented with support from Public Health England

MAURICE Project

Focused on developing a training manual and implementing training activities to improve infection prevention and control (IPC) among healthcare workers in Nigeria. Implemented in two states with support from Robert Koch Institute.

5

PARTNERSHIPS



5.1 New Partnerships

CEPI

Supporting innovations for Lassa fever response



UK PUBLIC HEALTH RAPID SUPPORT TEAM (UK-PHRST)

Supporting outbreak response activities



RESOLVE TO SAVE LIVES

Supporting institutional development including implementation of National Action Plan for Health Security (NAPHS) and Regional Disease Surveillance Systems Enhancement (REDISSE) Project.



PRIVATE SECTOR HEALTH **ALLIANCE OF NIGERIA**

Supporting collaborations with the private sector for health security



5.2 Existing Partnerships for Global Health Security



World Health Organisation (WHO)

In Nigeria, WHO works very closely with NCDC as the national public heal institute. During outbreaks, staff from WHO initiate a joint response wi NCDC. In addition, WHO supports strengthening of in country capacity acro pillars of emergency response, laboratory capacity and disease surveillance.



Africa Centres for Disease Control and Prevention (Africa CDC)

Nigeria is the West African regional hub of the Africa CDC. The Africa CD in its coordination role continues to support organisational development ar support to other West African countries Nigeria through NCDC. In 2018, ACD supported the response to Lassa fever and monkeypox outbreaks.



West African Health Organisation (WAHO)

Nigeria is the host of the West Africa Regional Centre for Surveillance ar Disease Control (RCSDC) coordinated by WAHO. In 2018, WAHO supporte the response to outbreaks of yellow fever and Lassa fever, organised a larg scale simulation exercise in Lagos State and other institutional support.



Centers for Disease Control and Prevention (CDC)

When the NCDC was established in 2011, it was modelled after the US-CD Seven years after, the US CDC continues to provide strong support to the grow of the agency. In addition to support for programmes and projects, US CC Global Health Programme country office staff work closely with the NCC headquarters in Abuja.



African Field Epidemiology Network (AFENET)

AFENET works closely with NCDC, especially in the delivery of the Niger Field Epidemiology and Laboratory Training Programme (NFELTP). In additio several NCDC/AFENET collaborations have led to the successful delivery programmes in Nigeria.



Bill & Melinda Gates Foundation

The Bill & Melinda Gates foundation supports NCDC in its institution strengthening and development process. Through the foundation's suppo NCDC began a project to develop a strategy plan, drive implementatio leadership management and development courses for staff etc. In addition, the foundation supported the response to CSM and Lassa fever outbreaks.



Japan International Cooperation Agency (JICA)

The Government of Japan through JICA is supporting Nigeria through NCDC, in establishing a Biosafety Level 3 laboratory, as well as strengthening the network of public health laboratories.



ProHealth International

With support from the US CDC, Pro Health works primarily with the Port Health Services, but also with NCDC to strengthen surveillance at the borders in Nigeria.



Public Health England (PHE)

In 2018, the Government of Nigeria signed a Memorandum of Understanding with the Government of the United Kingdom. This programme to be implemented between the national public health institutes of both countries (NCDC and PHE) will focus on strengthening capacity across laboratory services, health emergency preparedness and response, surveillance and epidemiology.



Robert Koch Institut (RKI)

In supporting each other, NCDC works with national public health institutes include the German RKI, to implement health security programmes. The RKI supports Antimicrobial Resistance (AMR) and infection prevention control (IPC) activities implemented by NCDC.



Resolve to Save Lives

This relatively new non-governmental organisation in the United States of America, has supported programme management and implementation strengthening in Nigeria. RESOLVE played a key role in supporting the development of Nigeria's NAPHS and has three members of staff embedded in NCDC to support large projects such as REDISSE.



United Nations Children's Fund (UNICEF)

Within its mandate, UNICEF supports NCDC in developing and implementing risk communications strategies for disease outbreaks and public health emergencies.



University of Maryland Baltimore (UMB)

The UMB is a close partner of NCDC, supporting activities across surveillance strengthening and capacity development. Members of staff of UMB work very closely with NCDC including in the response to outbreaks.



International Association of National Public Health Institutes (IANPHI)

NCDC is a member of IANPHI, providing a framework of collaboration among national public health institutes. IANPHI has supported NCDC through grants for capacity development in emergency response, risk communications and sample transportation manual development.



Tony Blair Institute (TBI)

Supported by the Gates Foundation, the Tony Blair Institute (TBI) has three staff working within NCDC Headquarters. They support roles around strategy implementation, communications and partnerships.

5.3 National Partnerships



Federal Ministry of Health (FMoH)

Parent Ministry



National Primary Health Care Development Agency (NPHCDA)

Collaboration for vaccine preventable diseases.



National AIDS Control Agency (NACA)

Collaboration in the delivery of Nigeria AIDS Indicator and Impact Survey.



Federal Ministry of Agriculture and Rural Development (FMARD)

Collaboration in the preparedness for and response to zoonotic diseases and Antimicrobial Resistance surveillance.



Federal Ministry of Environment (FMEnv)

Collaboration in response to Lassa fever, cholera and Antimicrobial Resistance surveillance.

5.4 Other National Partnerships

Nigerian Institute of Medical Research (NIMR)

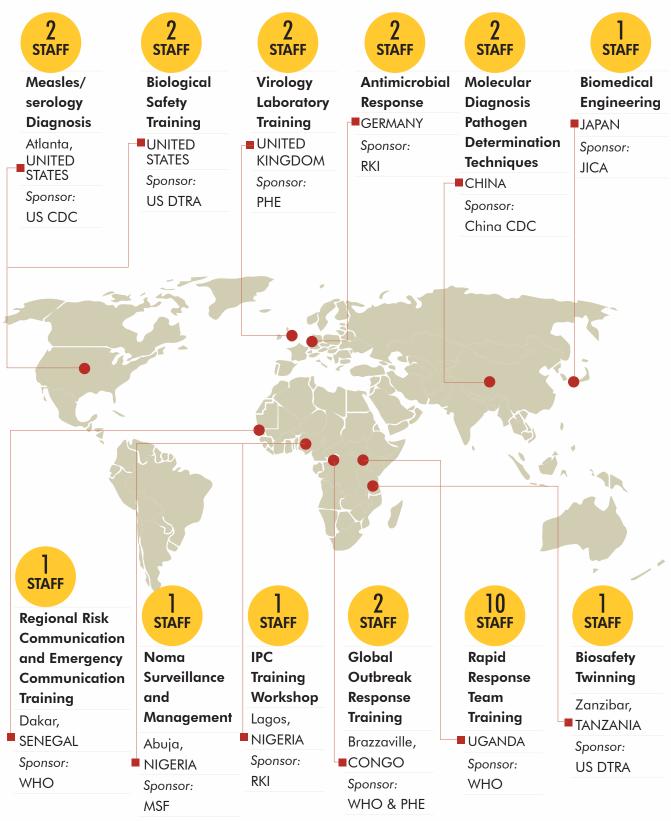
Nigerian Institute for Pharmaceutical Research and Development (NIPRD)

Ministry of Defence Health Implementation Programme

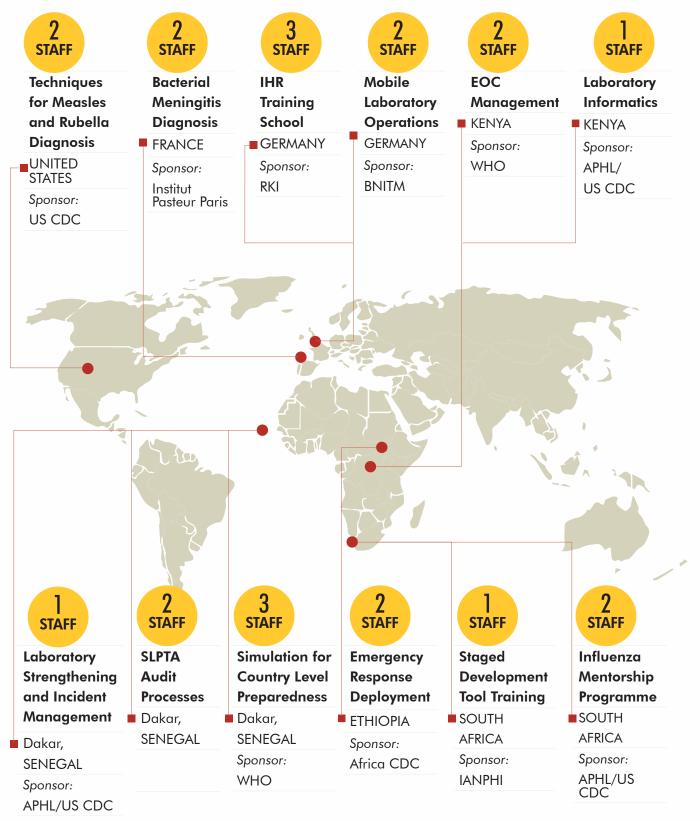
BUILDING A WORKFORCE FOR HEALTH SECURITY



6.1 Staff Training



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6.2 Nigeria Field Epidemiology and Training Programme (NFELTP)



6.3 National Training of Health Workers on Lassa Fever Management and Response









RESEARCH AND DEVELOPMENT AT NCDC





7.1 NCDC Research Activities

Research papers published in 2018

 Improving epidemiological response: lessons learnt from successive outbreaks in Nigeria

Authors: Assad Hassan, Muhammad Balogun, Mahmood Dalhat, Chikwe Ihekweazu

• Use of the staged development tool for assessing, planning, and measuring progress in the development of national public health institutes

Authors: Ezra J. Barzilay, Henry Vandi, Sue Binder, Ifeyinwa Udo, Martha L. Ospina, Chikwe Ihekweazu, and Shelly Bratton

 Two cases of monkeypox imported to the United Kingdom, September 2018

Authors: Aisling Vaughan, Emma Aarons, John Astbury, Sooria Balasegaram, Mike Beadsworth, Charles R Beck, Meera Chandó, Catherine O'Connor, Jake Dunning, Sam Ghebrehewet, Nick Harper, Ruth Howlett-Shipley, Chikwe Ihekweazu, Michael Jacobs, Lukeki Kaindama, Parisha Katwa, Saye Khoo, Lucy Lamb, Sharon Mawdsley, Dilys Morgan, Ruth Palmer, Nick Phin, Katherine Russell, Bengü Said, Andrew Simpson, Roberto Vivancos, Michael Wade, Amanda Walsh, Jennifer Wilburn

 Meningococcus serogroup C clonal complex ST-10217 outbreak in Zamfara State, Northern Nigeria

Authors: Brenda A. Kwambana-Adams, Rahab C. Amaza, Catherine Okoi, Murtala Rabiu, Archibald Worwui, Ebenezer Foster-Nyarko, Bernard Ebruke, Abdul K. Sesay, Madikay Senghore, Abdullahi S. Umar, Rabi Usman, Adamu Atiku, Garba Abdullahi, Yahaya Buhari, Rabiu Sani, Husaini U. Bako, Bashir Abdullahi, Alliyu I. Yarima, Badaru Sikiru, Aderinola Olaolu Moses, Michael O. Popoola, Eme Ekeng, Adebola Olayinka, Nwando Mba, Adamu Kankia, Ibrahim N. Mamadu, Ifeanyi Okudo, Mary Stephen, Olivier Ronveaux, Jason Busuttil, Jason M. Mwenda, Mohammed Abdulaziz, Sulaiman A. Gummi, Adebayo Adedeji, Andre Bita, Linda Omar, Mamoudou Harouna Djingarey, Wondimagegnehu Alemu, Umberto D'Alessandro, Chikwe Ihekweazu and Martin Antonio

 Metagenomic sequencing at the epicenter of the Nigeria 2018 Lassa fever outbreak. Science. December 2018

Authors: Kafetzopoulou LE, Akpede, Okokhere, Rafii, Iraoyah KO, Naidoo D, Hewson R, Hiscox, Ihekweazu C, Formenty P, Okogbenin S, Ogbaini-Emovon E, Günther S, Duraffour S

Notes from the Field: Responding to an outbreak of monkeypox using the
 One Health approach – Nigeria, 2017– 2018

Authors: Womi-Eteng Eteng, MSc; Anna Mandra, DVM; Jeff Doty; Adesola Yinka-Ogunleye, DDS; Sola Aruna, MD; Mary G. Reynolds, PhD; Andrea M. McCollum, PhD; Whitni Davidson, MPH; Kimberly Wilkins; Muhammad Saleh, MPH; Oladipupo Ipadeola, MSc; Lamin Manneh; Uchenna Anebonam, MPH; Zainab Abdulkareem, DVM; Nma Okoli, DVM; Jeremiah Agenyi; Chioma Dan-Nwafor, MPH; Ibrahim Mahmodu, MPH; Chikwe Ihekweazu, MD

Time delays in the response to the Neisseria meningitidis serogroup C
 outbreak in Nigeria – 2017

Authors: Assad Hassan, G. U. Mustapha, Bola B. Lawal, Aliyu M. Na'uzo, Raji Ismail, Eteng Womi-Eteng Oboma, Oyeronke Oyebanji, Jeremiah Agenyi, Chima Thomas, Muhammad Shakir Balogun, Mahmood M. Dalhat, Patrick Nguku, Chikwe Ihekweazu

• Re-emergence of Human Monkeypox in Nigeria, 2017

Authors: Adesola Yinka-OgunleyeComments to Author, Olusola Aruna, Dimie Ogoina, Neni Aworabhi, Womi Eteng, Sikiru Badaru, Amina Mohammed, Jeremiah Agenyi, E.N. Etebu, Tamuno-Wari Numbere, Adolphe Ndoreraho, Eduard Nkunzimana, Yahyah Disu, Mahmood Dalhat, Patrick Nguku, Abdulaziz Mohammed, Muhammad Saleh, Andrea M. McCollum, Kimberly Wilkins, Ousmane Faye, Amadou Sall, Christian Happi, Nwando Mba, Olubumi Ojo, and Chikwe Ihekweazu

 Genomic characterisation of human monkeypox virus in Nigeria (IP Dakar) January 16, 2018

Authors: Ousmane Faye, Catherine B Pratt, Martin Faye, Gamou Fall, Joseph A Chitty, Moussa M Diagne, Michael R Wiley, Adesola F Yinka-Ogunleye, Sola Aruna, Ebitimitula N Etebu, Neni Aworabhi, Dimie Ogoina, Wari Numbere, Nwando Mba, Gustavo Palacios, Amadou A Sall, Chikwe Ihekweazu



7.2 NCDC Journal Club

Quarterly meetings to discuss trending infectious disease research issues.

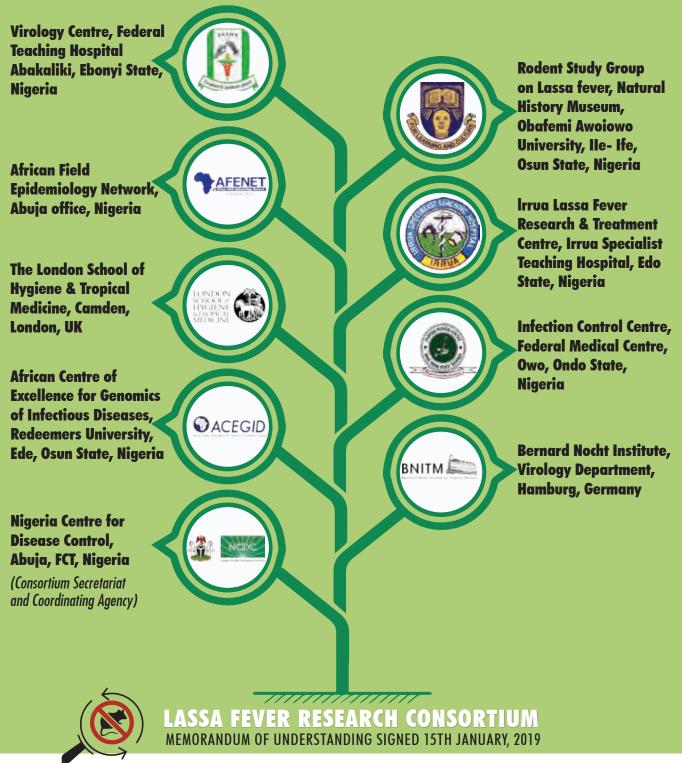


7.3 National Surveillance and Outbreak Review Meeting (NaSORM)

■ Takes place every Thursday at NCDC Situation Room to review outbreak response, surveillance data and define interventions.



7.4 National Lassa Fever Research Consortium



MAJOR EVENTS/ACTIVITIES IN 2018



The Bill for an Act to establish the Nigeria Centre for 8.1 Disease Control signed by President Muhammadu Buhari - November 2018





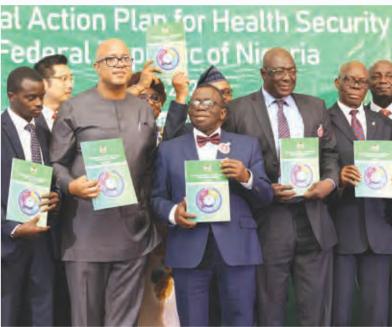


Launch of the National Action Plan for Health Security by 8.2 Honourable Minister of Health - December 2018









8.3 Visit of the WHO Director General to Nigeria Centre for Disease Control – April 2018



8.4 Diplomatic Visit to the NCDC National Reference Laboratory Gaduwa, Abuja by the Canadian High Commissioner, Christopher Thornley – March 2018



8.5 Diplomatic Visit to the NCDC Administrative Headquarters, Abuja by US Ambassador to Nigeria, Stuart Symington

- September 2018





8.6 Launch of the Alliance for Epidemic Preparedness and Response by Honourable Minister and Minister of State for Health – August 2018



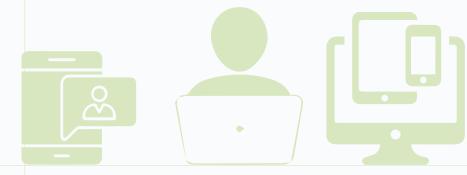
NCDC/NFELTP Annual Conference and 10th Anniversary 8.7 of NFELTP - November 2018



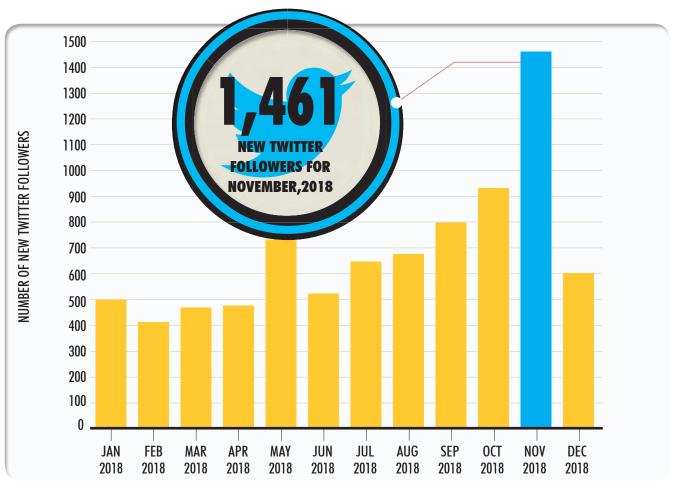


OUR ONLINE PRESENCE

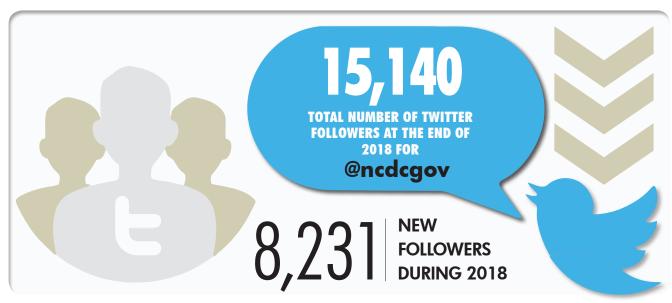
- info@ncdc.gov.ng
- @ncdcgov
- (f) www.facebook.com/ncdcgov
- ncdc.gov.ng
- Nigeria Centre for Disease Control NCDC



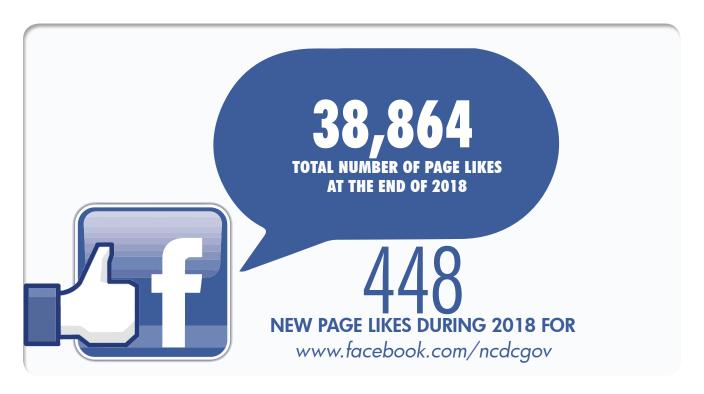
9.1 New Twitter Followers



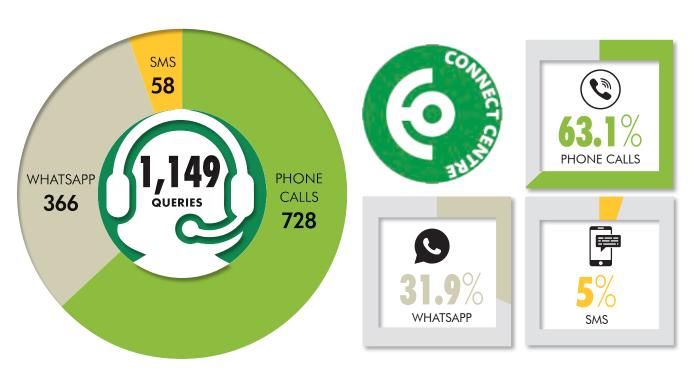
9.2 Number of Twitter Followers in 2018



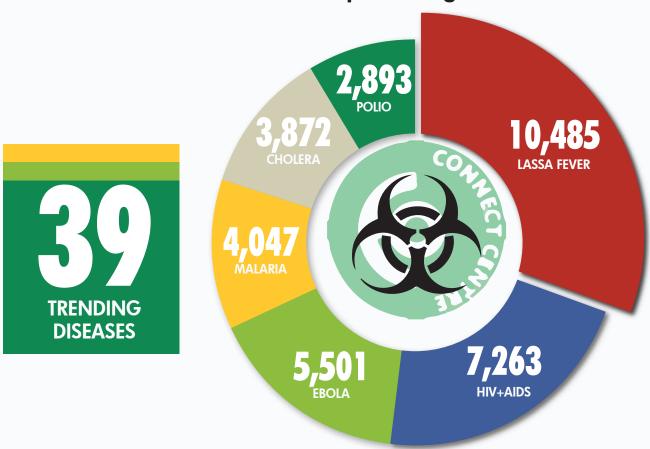
9.3 Number of Facebook Likes in 2018



9.4 Connect-centre Surveillance Query Channels in 2018

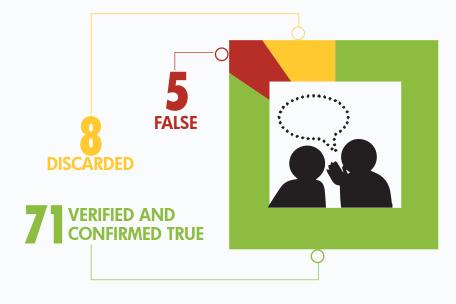


9.5 Event Based Surveillance – Top Trending Diseases

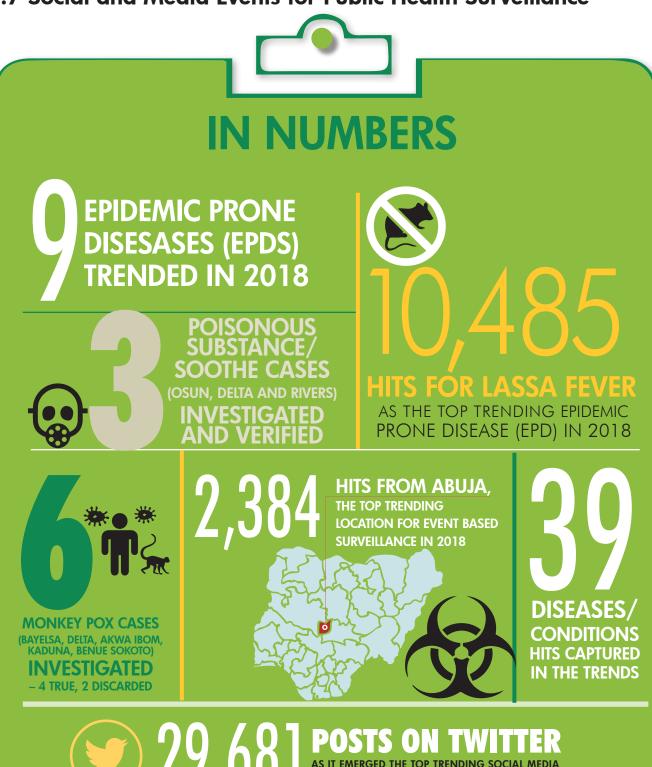


9.6 Event Based Surveillance – Top Trending Rumours



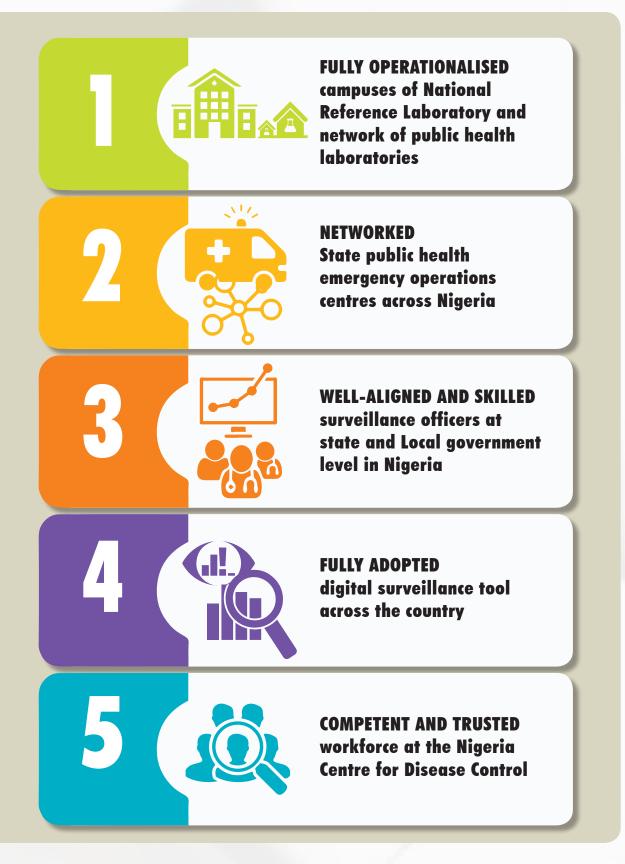


9.7 Social and Media Events for Public Health Surveillance



5 PRIORITIES FOR THE NEXT ONE YEAR





ABBREVIATIONS AND ACRONYMS

A4EPR	Alliance for Epidemic Preparedness and Response				
ACDC	Africa Centres for Disease Control				
AFENET	African Field Epidemiology Network				
AMR	Anti-microbial Resistance				
BNITM	Bernhard Nocht Institute for Tropical Medicine				
CDC	Centers for Disease Control and Prevention				
CPHL	Central Public Health Laboratory				
CSM	Cerebrospinal Meningitis				
EMT	Emergency Medical Team				
EOCs	Emergency Operation Centres				
EQA	External Quality Assurance				
GHSA	Global Health Security Agenda				
GOARN	Global Outbreak and Response Network				
ICC	Incident Coordination Centre				
IDSR	Integrated Disease Surveillance and Response				
IHR	International Health Regulations				
IPC	Infection, Prevention and Control				
IPPIS	Integrated Payroll and Personnel Information System				
ITSON	Integrated Training for Surveillance Officers in Nigeria				
JICA	Japan International Cooperation Agency				
JEE	Joint External Evaluation				
LASUTH	Lagos State University Teaching Hospital				
LUTH	Lagos University Teaching Hospital				
MCM	Medical Countermeasures				
MDAs	Ministries, Departments and Agencies				
MRC	Medical Research Council				
N-FIRST	National First Responders Team				
NACA	National Agency for the Control of AIDS				

ABBREVIATIONS AND ACRONYMS

NAIIS	Nigeria HIV/AIDS Indicator and Imapct Survey				
NAPHS	National Action Plan for Health Security				
NaSORM	National Surveillance and Outbreak Review Meetings				
NCDC	Nigeria Centre for Disease Control				
NFELTP	National Field Epidemiology Training Program				
NRL	National Reference Laboratory				
PHE	Public Health England				
PHEOCs	Public Health Emergency Operation Centers				
PHN	Private Sector Health Alliance in Nigeria				
REDISSE	Regional Disease Surveillance Systems Enhancement				
RKI	Robert Koch Institut				
RRTs	Rapid Response Teams				
RRTs RTKM	Rapid Response Teams Research, Training and Knowledge Management				
RTKM	Research, Training and Knowledge Management				
RTKM SORMAS	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System				
RTKM SORMAS TWGs	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System Technical Working Groups				
RTKM SORMAS TWGs UK-PHRST	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System Technical Working Groups UK Public Health Rapid Support Team				
RTKM SORMAS TWGs UK-PHRST UNICEF	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System Technical Working Groups UK Public Health Rapid Support Team United Nations Children's Fund				
RTKM SORMAS TWGs UK-PHRST UNICEF UNTH	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System Technical Working Groups UK Public Health Rapid Support Team United Nations Children's Fund University of Nigeria Teaching Hospital				
RTKM SORMAS TWGs UK-PHRST UNICEF UNTH VHF	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System Technical Working Groups UK Public Health Rapid Support Team United Nations Children's Fund University of Nigeria Teaching Hospital Viral Haemorrhagic Fever				
RTKM SORMAS TWGs UK-PHRST UNICEF UNTH VHF WARDS	Research, Training and Knowledge Management Surveillance and Outbreak Review Management System Technical Working Groups UK Public Health Rapid Support Team United Nations Children's Fund University of Nigeria Teaching Hospital Viral Haemorrhagic Fever West African Regional Disease Surveillance				

NOTES





NIGERIA CENTRE FOR DISEASE CONTROL ANNUAL REPORT 2018

NIGERIA CENTRE FOR DISEASE CONTROL

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