Between January and May 2018, Nigeria experienced its largest reported outbreak of Lassa fever. In responding to the outbreak, critical questions were raised concerning the disease for which answers were either not readily available or required additional validation.

In this regards, the Nigeria Centre for Disease Control (NCDC) has taken a leadership role to build a Research and Development (R&D) roadmap for Lassa fever in Nigeria.
To bring the roadmap into reality, a National Lassa fever R&D Stakeholders meeting was convened between the 3rd and 4th of July 2018 in Abuja. The participants at this meeting included case management physicians from the various Lassa fever treatment centres, local and international researchers, partners including the World Health Organization and the host, NCDC.

The meeting was aimed at identifying the key research areas for Lassa fever, developing research objectives and plans for each area and engaging partners for research implementation. The main areas of research cut across epidemiology of Lassa fever, case management, vector transmission, laboratory diagnosis and risk communications.

The next few weeks will involve finalising the plans and mapping out resources for the research.

The outcomes of these activities will help define the landscape with improved knowledge about Lassa fever, guide preparedness and response activities for future outbreaks and drive control/prevention measures for the disease.

**SUMMARY OF REPORTS**

In the reporting week ending on June 24, 2018:

- There were 125 new cases of Acute Flaccid Paralysis (AFP) reported. None was confirmed as Polio. The last reported case of Polio in Nigeria was in August 2016. Active case search for AFP is being intensified as Nigeria has reinvigorated its efforts at eradicating Polio.

- 828 suspected cases of Cholera were reported from 34 LGAs in 12 States (Adamawa – 29, Bauchi – 183, Borno – 27, FCT – 2, Gombe – 41, Jigawa – 13, Kaduna – 11, Kano – 110, Katsina – 45, Kogi – 4, Plateau - 24 & Zamfara - 339). Of these, nine were laboratory confirmed and nine deaths were recorded.

- 24 suspected cases of Lassa fever were reported from nine LGAs in six States (Adamawa – 1, Edo – 9, Gombe – 1, Ondo – 8, Osun - 2 & Plateau – 2). Six were laboratory confirmed and two deaths were recorded.

- There were 16 suspected cases of Cerebrospinal Meningitis (CSM) reported from 12 LGAs in eight States (Abia -1, Ebonyi – 1, Gombe – 1, Kaduna – 4,
Katsina – 4, Oyo – 1, Taraba – 2 & Yobe - 2). Of these, two were laboratory confirmed and no death was recorded.

- There were 222-suspected cases of Measles reported from 33 States. No laboratory confirmed and no death was recorded.

In the reporting week, all States sent in their report except Taraba State. Timeliness of reporting remains 89% in both the previous and current weeks (week 24 & 25) while completeness also remains 99% at same period. It is very important for all States to ensure timely and complete reporting at all times, especially during an outbreak.

**REPORT ANALYSIS AND INTERPRETATION**

1. **AFP**
   1.1. As at June 24th 2018, no new case of WPV was recorded
   1.2. In the reporting week, 125 cases of AFP were reported from 106 LGAs in 30 States & FCT
   1.2.1. AFP Surveillance has been enhanced and outbreak response is on-going in Borno and other high-risk States
   1.2.2. The 2nd NIPDs was conducted from 30th June to 3rd July, 2018 using bOPV in 36 States plus FCT
   12.2 The 1st & 2nd Outbreak response (OBR) to cVDPV2 in Jigawa & Gombe States, Polio event in Sokoto (SLGAs) and mop-up response in 11 LGAs in Bauchi State conducted from 10th – 13th & 26th – 29th May, 2018 using mOPV2 respectively
   1.2.3 Two SIPDs and one NIPDs were conducted from January to April, 2018 using bOPV in 18 high risk States and 36 States plus FCT respectively

**Table 1: 2018 SIAs**
2. CEREBROSPINAL MENINGITIS (CSM)

2.1 In the reporting week, 16 suspected Cerebrospinal Meningitis (CSM) cases with two Lab confirmed were reported from 12 LGAs (eight States; Abia -1, Ebonyi – 1, Gombe – 1, Kaduna – 4, Katsina – 4, Oyo – 1, Taraba – 2 & Yobe - 2) compared with seven suspected cases from five LGAs (five States) at the same period in 2017 (Figure 1).

2.2 Between weeks 1 and 25 (2018), 3183 suspected meningitis cases with 102 laboratory confirmed and 206 deaths (CFR, 6.47%) from 252 LGAs (29 States) were reported compared with 9675 suspected cases and 601 deaths (CFR, 6.21%) from 297 LGAs (31 States) during the same period in 2017.

2.3 Timeliness/completeness of CSM case-reporting from States to the National Level (2018 versus 2017): on average, 88.2% of the 26 endemic States sent CSM reports in a timely manner while 98.2% were complete in week 1 - 25, 2018 as against 76.4% timeliness and 92.3% completeness recorded within the same period in 2017.

2.4 The 2018 CSM outbreak has been declared over following epidemiological review and decline in number of cases.

Figure 1: Map of Nigeria showing areas affected by CSM, week 1 - 25, 2017 & 2018
3. **CHOLERA**

3.1 828 suspected cases of Cholera with 36 Laboratory Confirmed cases and 17 deaths (CFR, 1.98%) were reported from 34 LGAs (12 States; Adawama – 29, Bauchi – 183, Borno – 27, FCT – 2, Gombe – 41, Jigawa – 13, Kaduna – 11, Kano – 110, Katsina – 45, Kogi – 4, Plateau - 24 & Zamfara - 39) in week 25, 2018 compared with 82 suspected cases with one Laboratory confirmed and one death (CFR, 1.2%) were reported from six LGAs (Kwara State) during the same period in 2017 (Figure 2).

3.2 Between weeks 1 and 25 (2018), 9122 suspected Cholera cases with 253 laboratory confirmed and 126 deaths (CFR, 1.38%) from 84 LGAs (21 States) were reported compared with 483 suspected cases and seven deaths (CFR, 1.45%) from 22 LGAs (13 States) during the same period in 2017.

3.3 A National Emergency Operations Centre (EOC) for Cholera has been activated at level 2 at NCDC.

3.4 Rapid Response Teams have been deployed to respond to recent cluster of cases in Kano, Bauchi, Plateau, Zamfara and Adamawa States.


**Figure 2**: Status of LGAs/States that reported Cholera cases in week 1 - 25, 2017 & 2018
4 LASSA FEVER

4.1 In the reporting Week 25 (June 18-24, 2018) six new confirmed cases were reported from Edo(4) Ondo(1) and Plateau(1) state with two deaths in Plateau and Edo state.

4.2 From 1st January to 24th June 2018, a total of 2042 suspected cases have been reported from 21 states. Of these, 444 were confirmed positive, 10 are probable, 1588 negative (not a case).

4.3 Since the onset of the 2018 outbreak, there have been 111 deaths in confirmed cases and 10 in probable cases. Case Fatality Rate in confirmed cases is 25.0%.

4.4 21 states have recorded at least one confirmed case across 71 Local Government Areas (Edo, Ondo, Bauchi, Nasarawa, Ebonyi, Anambra, Benue, Kogi, Imo, Plateau, Lagos, Taraba, Delta, Osun, Rivers, FCT, Gombe, Ekiti, Kaduna, Abia and Adamawa). Eighteen states have exited the active phase of the outbreak while three - Edo, Ondo and Plateau States remain active - Figure 3.

4.5 In the reporting week 25, one new healthcare worker was infected with one death in Edo state. Thirty-nine health care workers have been affected since the onset of the outbreak in seven states – Ebonyi (16), Edo (14), Ondo (4), Kogi (2), Nasarawa (1), Taraba (1) and Abia (1) with ten deaths in Ebonyi (6), Kogi (1), Abia (1), Ondo (1) and Edo (1).

4.6 81% of all confirmed cases are from Edo (42%), Ondo (24%) and Ebonyi (15%) states.
4.7 Four patients are currently being managed at treatment Centres – three at Irrua Specialist Teaching Hospital (ISTH) and one at the Federal Medical Centre Owo treatment Centre.

4.8 A total of 5618 contacts have been identified from 21 states. Of these 267 (4.8%) are currently being followed up, 5341 (95.0%) have completed 21 days follow up while 10 (0.2%) were lost follow up. 85 symptomatic contacts have been identified, of which 29 (34%) have tested positive from five states (Edo-13, Ondo-8, Ebonyi-3, Kogi -3, Bauchi-1 and Adamawa-1).

4.9 National intensive clinical workshop on diagnosis, management and control of Lassa Fever phase two - practical/hands-on training on case management and laboratory diagnosis scheduled for 28th – 29th June 2018 at ISTH Irrua Edo state.

4.10 Case Management Guideline review meeting of national Lassa fever expert review committee scheduled for 5th -6th July 2018 at Abuja.

4.11 Lassa fever Research workshop in collaboration with WHO research and development roadmap held from 3rd-4th July 2018 in Abuja.

4.12 Lassa fever national multi-partner, multi-agency Technical Working Group(TWG) continues to coordinate response activities at all levels.


Figure 3: Map of Nigeria showing areas affected by Lassa fever, week 1 - 25, 2017 & 2018
Figure 4. Distribution of Suspected and Confirmed Lassa Fever cases in Nigeria by LGA

Legend
- LGA Boundaries
- Non-Affected LGAs
- States Boundary
- LGAs with Suspected Cases
- LGAs by Number of Confirmed Cases
  - 1-10
  - > 10

5 MEASLES
5.1 In the reporting week, 222 suspected cases of Measles were reported from 33 States compared with 338 suspected cases with five Laboratory confirmed and one death (CFR, 0.35%) reported from 27 States during the same period in 2017.

5.2 So far, 11478 suspected Measles cases with 13 Lab. Confirmed and 94 deaths (CFR, 0.82 %) were reported from 36 States and FCT compared with 13484 suspected cases with 85 laboratory confirmed and 77 deaths (CFR, 0.57 %) from 37 States during the same period in 2017.

5.3 Response measures include immunization for all vaccine-preventable diseases in some selected/affected wards/LGAs during SIAs, as well as case management.

**Figure 5: Suspected Measles attack rate by States, week 1 - 25, 2018 as at 24th June, 2018**

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6 Yellow fever
6.1 In this reporting week 18th June – 24th June, 2018, 178 suspected cases were added to the national line list.

6.2 No new in-country presumptive positives in the reporting week, last presumptive positive case in the Nigerian lab was 10-May-18 and last IP Dakar confirmed case from Nigeria was on 6-June -2018

6.3 From the onset of this outbreak on September 12, 2017, a total of 2,253 suspected yellow fever cases with 47 Laboratory confirmed and 47 deaths (CFR, 2.1%) were reported from 460 LGAs (36 States & FCT)

6.4 Predominant age groups affected among the suspected cases are 20 years and below accounting for 62.3%; [male to female ratio is 1.4 to 1 (male 58.2%, female 41.8%)]

6.5 Surveillance has been intensified across states by NCDC

6.6 NCDC had provide onsite support to Kwara, Kogi, Plateau, Kebbi, Kano and Katsina States

6.7 Entomological survey, conducted in Kwara, Zamfara, Kebbi, Kano and Katsina States Surveillance and laboratory data harmonization and updating is on-going

6.8 Developed the chronogram of events for the phase 2 PMVC and strategies to verify microplans from the state/LGA and ward level

6.9 NCDC and partners had completed assessment of some laboratories in Nigeria for possible inclusion into the testing laboratory network

6.10 Media monitoring on traditional and new media channels and sharing YF messages on social media.
7. Update on national Influenza sentinel surveillance, Nigeria week 1 - 26, 2018

7.1. From week 1-26, 155-suspected cases were reported, of which 146 were Influenza-like illness (ILI), nine Severe Acute Respiratory Infection (SARI).

7.2. A total of 155 samples were received and all samples were processed. Of the processed samples, 146 (94.2%) were ILI cases, nine (5.8%) were Severe Acute Respiratory Infection (SARI).

7.4. Of the 146 processed ILI samples, 16 (11.0%) was positive for Influenza A; 26 (17.8%) positive for Influenza B and 104 (71.2%) were negative.

7.5. For the processed nine SARI samples, five (55.56%) were positive for Influenza A while the remaining four (44.44%) were negative.

7.6. 42 (27.1%) of the processed 155 samples were positive for Influenza, with 16 (38.1%) of these positive for Influenza A and 26 (61.9%) positive for Influenza B.
7.5. The subtypes A seasonal H3, 2009A/H1N1 and A/not subtyped account for (0.0%), 11 (68.8%) and 5 (31.2%) of the total influenza A positive samples respectively.

7.6 The subtypes B VICTORIA, B Not subtyped and B Yamagata account for 10(38.5%), 16(61.5%) and 0(0.0%) of the total influenza B positive samples respectively.

7.7 The percentage influenza positive was highest (75.0%) in week 6, 2018.

7.8 In the reporting week 1-26, no samples were left unprocessed.

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**Figure 7: Number of Influenza Positive Specimens and Percent Positive by Epidemiological Week (Week 1-26, 2018)**

FOR MORE INFORMATION CONTACT
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Table 2: Status of Reporting by the State Epidemiologists, Nigeria, Weeks 1-25, 2018, as at 24th June, 2018
### Weekly Epidemiological Report

#### Issue: Volume 8 No. 22

15th June, 2018

**Keys:**

- **(arrived on time)**
- **(report not received)**
- **(late)**
- **(No Report)**

#### State GeoZones

| State | GeoZones | NW1 | NW2 | NW3 | NW4 | NW5 | NW6 | NW7 | NW8 | NW9 | NW10 | NW11 | NW12 | NW13 | NW14 | NW15 | NW16 | NW17 | NW18 | NW19 | NW20 | NW21 | NW22 | NW23 | NW24 | NW25 |
|-------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Kwara | SEZ      | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Katsina | NEZ    | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kogi | NWZ    | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kaduna | NWZ   | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kano | NWZ    | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kebbi | NWZ    | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Katsina | NWZ   | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kogi | NWZ    | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kaduna | NWZ   | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |
| Kano | NWZ    | T   | T   | T   | T   | T   | T   | T   | T   | T   | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | T    | 1    |

**Legend:**

- **(arrived on time)**
- **(report not received)**
- **(late)**
- **(No Report)**

**Latest Week:** 35

**Completed reporting (as of 29th June, 2018):**

- **Volume 8 No. 22**

**Keys: (as of 29th June, 2018):**