2018 Lassa Fever Outbreak After Action Review 5-7 JUNE 2018

Contents

1. Executive Summary

CONTEXT –Nigeria, the most populous African nation continues to experience outbreaks and other public health emergencies. The country experienced the largest outbreak of Lassa fever ever reported in 2018. Twenty-one states (Edo, Ebonyi, Ondo, Taraba, Adamawa, Bauchi, Plateau, Nasarawa, Kogi, Lagos, Anambra, Benue, Imo, Osun, Rivers, Gombe, Ekiti, Kaduna, Abia, Delta and Abuja) were affected with 432 confirmed, 10 probable cases and 108 deaths (CFR 25%). A total of 5,353 contacts were identified nationally and followed up for 21 days. The emergency phase of the outbreak was declared over by the Nigeria Minister of Health on 10nth May 2018.

Under the IHR monitoring and evaluation framework, countries are encouraged to conduct After Action Review (AAR) of the response to Public Health emergencies in order to learn from the response and improve preparedness and response to future outbreaks /and other public health emergencies. It was on this premise that the Nigeria Centre for Disease Control (NCDC) in collaboration with the World Health Organization (WHO) conducted the Lassa fever AAR and preparedness meeting.

METHODOLOGY - The AAR was conducted between 5th – 7th June, 2018 at Barcelona Hotels, Abuja, Nigeria. The methodology comprised of the use qualitative and participatory approaches, standardized WHO framework and tools including the WHO guide for AAR; facilitators and participants' manual. The workshop had a total of 65 participants drawn from the Federal Ministry of Health, Nigeria Centre for Disease Control, State Ministries of Health, Lassa fever Steering committee members, physicians from major Treatment Centres and key partners. Also, 13 facilitators from NCDC and WHO (HQ, AFRO, WCO) were in attendance.

The AAR focused on the 2018 Lassa fever outbreak response that occurred in 21 states between January to May 2018. In total, 9 functions were reviewed in five (5) working groups:

- Group 1- Coordination and Logistics
- Group 2- Case management, Safe Burial and IPC
- Group 3 – Surveillance
- Group 4 - Risk Communication and Social Mobilization
- Group 5 - Laboratory

RESULTS – A total of 44 activities were developed and of these 14 key activities (at least 2 per working group) were prioritized to improve the preparedness and response to future Lassa fever outbreaks and other Public Health emergencies as follows:

Coordination and Logistics:

1. Generate a costed Lassa fever preparedness plan
2. Mobilize resources and technical support from partners for Lassa fever preparedness and response
3. Conduct monthly coordination meetings with Lassa fever stakeholders in states and Local Government Areas

Surveillance:

1. Designate surveillance focal person in all health facilities and community
2. Conduct IDSR training for all levels of the surveillance system
3. Mapping and sensitization of stakeholders and advocacy visit to them

Case Management, Safe Burial and IPC:

1. Equip three treatment centres with ICU equipment to manage critically ill Lassa fever patients
2. Identify and train relevant HCWs in treatment centres on ICU care for Lassa fever
3. Identify and train IPC team/committee in the treatment centres

Risk Communication and Social Mobilization:

1. Train social mobilization officers across LGAs in states
2. Production of IEC material
3. Media engagement

Laboratory:

1. Training on data management for Medical Laboratory Scientists and all NCDC network laboratories
2. Training and dissemination of SOPs on a sample management in all states

Evaluation of the workshop – 46 of the 65 participants completed the evaluation survey:

- 70 % of participants fully or strongly agreed that the AAR allowed participants to identify challenges and gaps encountered during the course of the response
- 72 % of participants fully or strongly agreed that the AAR allowed participants to share experiences and best practices encountered during the course of the response
- 64 % of participants fully or strongly agreed that the AAR allowed participants to propose actions for improving preparedness, early detection and response to public health emergencies
- 58% of participants fully or strongly agreed they would use this methodology for AAR for other public health emergencies in Nigeria.

CONCLUSION

The 2018 Lassa fever outbreak was the largest outbreak ever recorded in the history of Nigeria with confirmed cases as at May 2018 exceeding the total number of confirmed cases for 2017. The AAR and preparedness meeting availed participants the opportunity to appraise the response activities during the outbreak. The AAR was successfully conducted with active participation of participants, stakeholders and partners and provided opportunity to share experiences, identify best practices, gaps and lessons learnt. The findings will be used to strengthen subsequent preparedness and response measures. The implementation of agreed priority actions will be critical for improving future response to Lassa fever outbreak and other public health emergencies in Nigeria.

2. Background on Emergency

Lassa fever is a major public health concern in Nigeria, with suspected cases being reported throughout the year. It is an acute viral zoonotic disease with high virulence and is endemic in Nigeria. Lassa fever is one of the viral heamorrhagic fevers (VHF) and has incubation period of 2-21 days. Bouts of outbreak occur annually in Nigeria causing great morbidity and mortality. Transmission occurs through contact with urine and faeces of the multi–mammate rat *Mastomys natalensis,* as well as direct contact with an infected person. Lassa virus is named after Lassa village in Borno State, North-East Nigeria where it was first discovered in 1969. It is a priority disease that requires immediate notification by health authorities.

The 2018 Lassa fever outbreak started on 14th January 2018 with a healthcare worker in Federal Teaching Hospital Abakaliki, Ebonyi State. Cases later spread to twenty other states. As at week 22 of 2018, a total of 1,982 suspected cases, 432 confirmed cases and 10 probable cases were recorded. Of these, 1540 were negative/not cases of Lassa Fever. The confirmed cases as at week 22 were more than all confirmed cases of 2017. About 5,353 contacts were identified nationally and followed up for 21 days. Deaths in probable and confirmed cases was 108 (Case Fatality Rate: 25%).

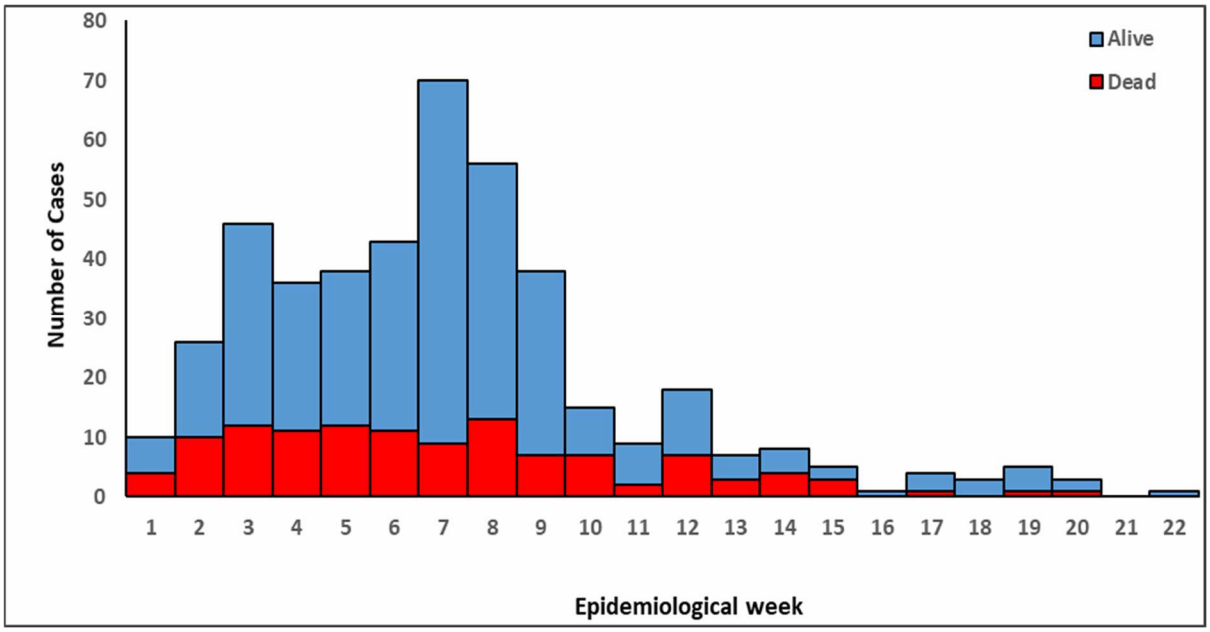


Figure 1: Epicurve of Lassa Fever cases in Nigeria as at week 22, 2018

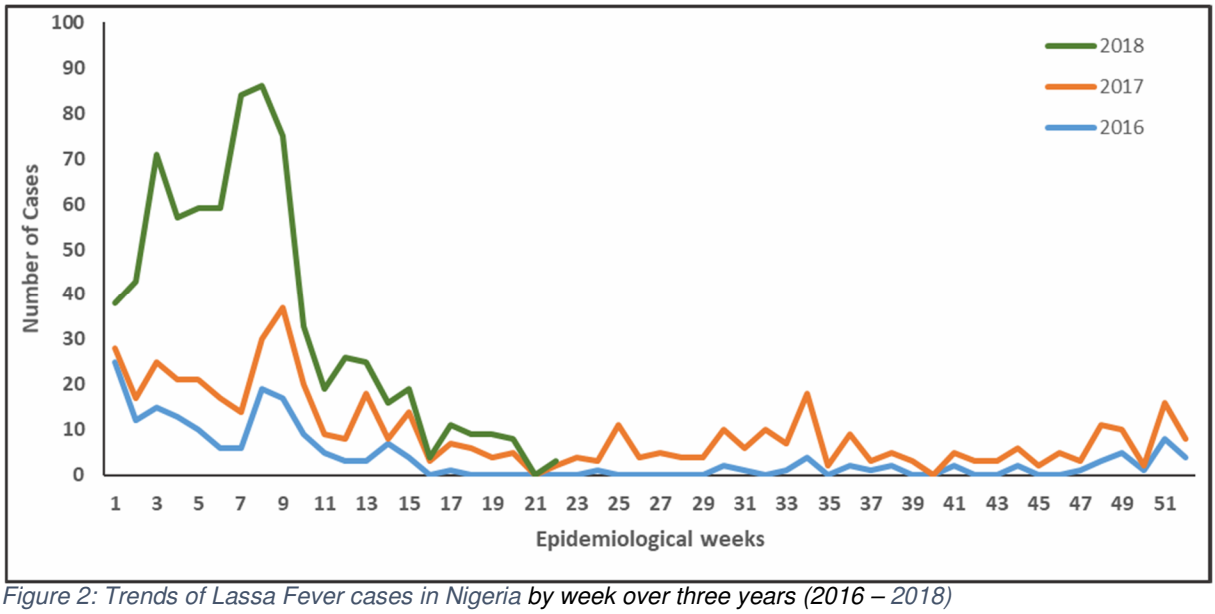


Figure 2: Trends of Lassa Fever cases in Nigeria by week over three years (2016 – 2018)

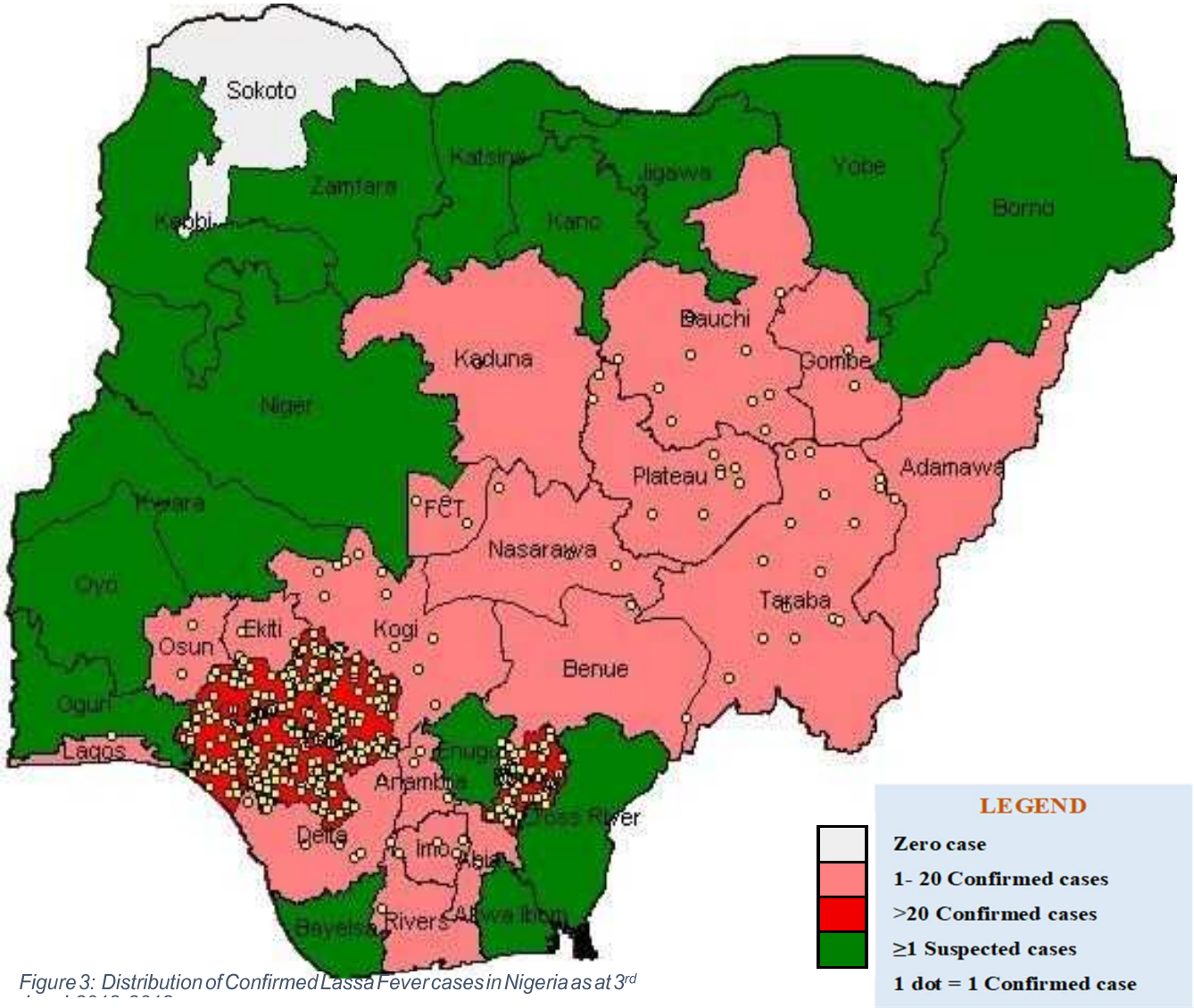


Figure 3: Distribution of Confirmed Lassa Fever cases in Nigeria as at 3rd

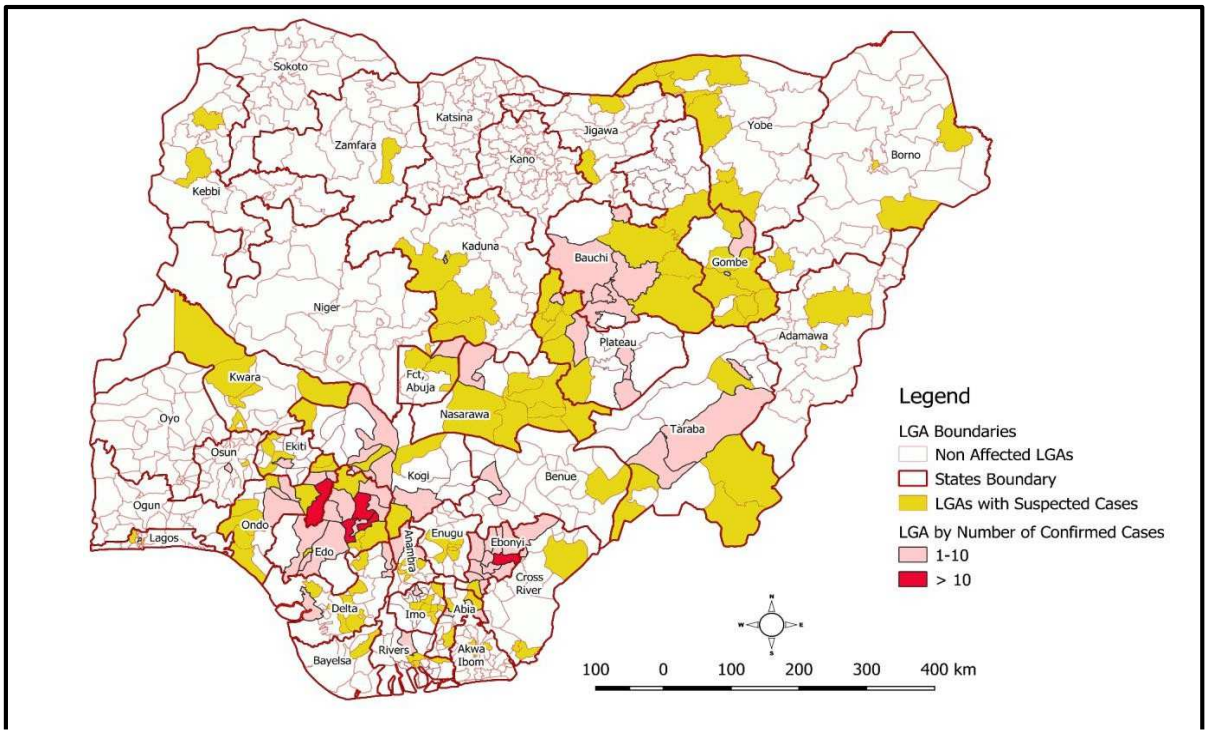


Figure 4: Distribution of suspected and confirmed cases by Local Government Areas in Nigeria, as at 3rd June, 2018.

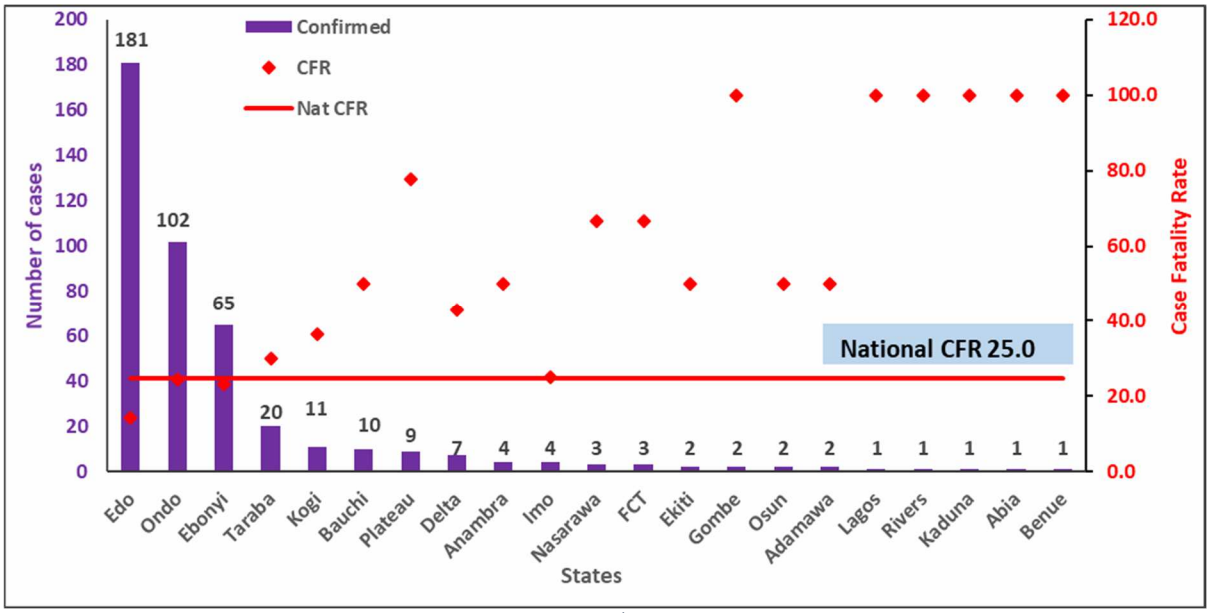


Figure 5 Confirmed cases with State specific CFR as at 3rd June, 2018

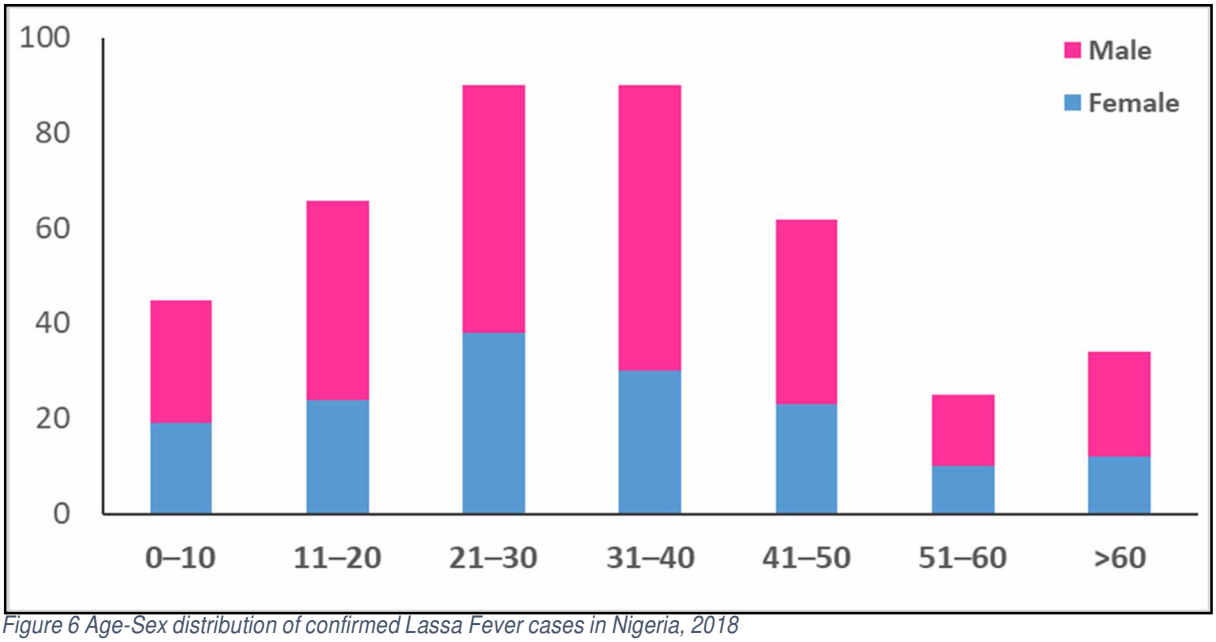


Figure 6 Age-Sex distribution of confirmed Lassa Fever cases in Nigeria, 2018

Cases were identified using standard case definitions as contained in the IDSR and were reported according to the reporting channels of the IDSR.

The NCDC coordinated response activities during the outbreak by setting up a multi sectoral EOC using the one health approach. Various partners also participated and were part of the EOC. Response activities included early prepositioning of consumables and Ribavirin to high burden states that were identified based on data from previous Lassa fever outbreaks. Multi-disciplinary Rapid Response Teams were deployed to different states to assist in various activities based on the peculiarity of the state, and also to neighbouring states that border Benin Republic. There were media and community engagements to sensitize and enlighten the public and to give out the relevant and appropriate information. Weekly sitreps were also developed and disseminated to all stakeholders and the public.

Due to the unprecedented magnitude of the outbreak, there was a high-level advocacy visits to Governors of Ondo and Edo State and also an emergency National Council of Health meeting was convened by the HMH to enlighten all state Commissioners of Health for proper case management and strengthening of their surveillance system. The major treatment centers in Edo, Ondo and Ebonyi States were expanded, rehabilitated and activated respectively to help in managing the high number of cases. Also, the testing laboratories were expanded to 4 which allowed for easy transportation and timely testing of samples.

As a result of the various activities, there was strong commitment from the governors who were met and relevant stakeholders and communities were better informed. This helped in proper case management and the sensitization reduced the exposure of individuals to the risk factors. The emergency phase of the outbreak was declared over on week 18 after the threshold level wasn't reached for two consecutive weeks.

3. Scope and Objective of review

WHO member states in the African region are faced with recurrent outbreaks and other public health emergencies, hence the need to review health emergencies with the view of strengthening best practises and adopting recommendations for the future. Under the International Health Regulations (IHR) 2005, all state parties are required to have or develop minimum core public health capacities to implement IHR effectively. Following recommendations from the IHR review committee, the IHR Monitoring and Evaluation Framework (IHRMEF) in addition to the obligatory annual reporting, was expanded to include 3 voluntary components namely: Joint External Evaluation (JEE), After Action Review (AAR), and Simulation Exercises (SimEx). In line with the IHRMEF, countries are encouraged to conduct AAR of response to public health emergencies in order to learn from the response to improve future outbreaks and public health emergencies.

Based on the foregoing, the Nigerian Centre for Disease Control (NCDC) in collaboration with the World Health Organization (WHO) conducted an AAR and preparedness meeting of the 2018 Lassa Fever outbreak in Nigeria to identify best practises and challenges encountered during response, validate existing mechanisms and identify areas for enhancement, and the following specific objectives:

- to review the 2018 Lassa fever outbreak and response in affected States in order to identify best practices and challenges
- to evaluate preparedness and response mechanisms in place during the response
- to develop recommendations to enhance National and State Preparedness and Response Plans
- to strengthen intra-disciplinary collaboration and coordination

4. Methods

The methodology used a qualitative and participative approach, using the standardized WHO framework and tools namely: guide of WHO for AAR, manual for facilitators and manual for participants. The format adopted for the review was the use of working groups for the thematic areas, facilitators that moderated the group activities and note takers for each working group. The methods used were participants driven discussions, sharing of experience, open interviews, use of trigger questions, plenary sessions and leading presentations that gave an overview of the AAR and the 2018 outbreak.

Participants included State Epidemiologists, State Disease Surveillance and Notification Officers (DSNO), State Health Educators, Case management physicians from treatment centres, Physicians, Medical Laboratory Scientists from the key testing laboratories and Logisticians from 21 states that were affected during the outbreak. Also, members of the Lassa Fever Technical working Group in NCDC, key departmental staff from the thematic areas in NCDC, representatives from the Federal Ministry of Health, Federal Ministry of Agriculture and Water Resources, Federal Ministry of Environment, AAR subject matter experts from WHO, partners and members of the Lassa fever steering committee. Reference materials used were as provided by WHO subject matter experts. The activities were grouped into five sessions as follows:

Session 1: What was in place before the outbreak?

Session 2: What happened in the response?

Session 3: What went well? What went less well? Why?

Session 4: What can we do to improve for next time?

Session 5: The way forward

Participants were divided into five groups to review functions and generate activities based on the scope of sessions. A facilitator and a note taker were attached to each group; also technical support was provided by WHO experts. The groups are as follows:

Group 1. Coordination and Logistics

Group 2. Case management, Safe burial and Infection Prevention and Control (IPC)

Group 3. Risk Communication and Social Mobilization

Group 4. Laboratory and Group 5. Surveillance

5. Findings

5.1 What was there before the response

Policies, Plans and Procedures	Coordination Mechanisms	Preparedness Activities	Resources	Others
National Level				
• SOP on routine surveillance • IDSR technical guidelines • Case definition (soft and hard copies {Posters, charts})-Edo • Outbreak preparedness plan • National TWG meeting • Risk communication plan, policy and procedures • National SOP for Lassa fever case management and safe burial (SB) • National Guideline for specimen handling & packaging. • Templates for reporting laboratory result. • Risk communication plan, policy and procedures • Treatment protocols and referral guidelines • Proposal and memos for resource mobilization in	• Establishment of EOC • Collaboration with other Ministries • Integration of all pillars in Lassa fever TWG	• Logistics commodities were sent to states • Weekly Feedback to states • Pre-outbreak visits to States • Training of Med. Lab. Scts., Clinicians and Cleaners • Prepositioning of supplies • Weekly national TWG meetings • Training on diagnosis of Lassa Fever (NRL) • Participation in 2017 Lassa fever AAR	1. Life River reagents 2. Anbion reagents 3. PCR Machine 4. RNA Extraction Kit 5. Trained Lab Personnel 6. Data manager 7. Biosafety class II and Glove Box	

some states (Edo, Ondo, Kaduna, Taraba, Bauchi)				
State level				
Monthly meetings Contact tracing and active case search Risk communication plan EOC and Lassa Fever committee Updated contact list of LGA mobilization officers/health educators	• Establishment of EOC in Ondo, Ebonyi and Kaduna • Quaterly EPR review meeting for all DSNOs • Collaboration with other ministries (Edo) • Updated contact list of LGA mobilization officers/health educators	• Functional RRT • Infrared thermometers (some states) • Training of Stake holders (State epidemiologist • Simulation exercise. • IEC materials in all states. • Updated data base of media contacts	• Personnel (State Epidemiologist, DSNOs and community informant) • Drugs • Line list for data capture • Lassa fever case investigation form • Budget plan (Not yet released • IEC materials • Jingles prepared for airing • Designated case burial teams, physicians, IPC committee • Triple packaging	• Supportive supervision • Peer review • Social Mobilization committee, grass root communicators structures, list of schools, list of churches and mosques and their leaders

5.2 Timeline of outbreak (if applicable)

Attached on an Excel spreadsheet

5.3 Coordination and Logistics

Best Practices	**Impact**	**Enabling Factor**
Formation and reactivation of EOCs	Coordinated and effective response	– Good existing relationship with partners – Political will – Availability of human resources
Availability of logistics (Drugs, consumables, vehicles)	Reduction of morbidity and mortality	Availability of resources
Capacity building	– Skilled workforce – Confident and competent workforce	– Technical expertise – Collaboration with partners – Availability of guidelines and protocols
Availability of funds at National level and some states	– Timely intervention –Prepositioning of drugs and consumables	– Political commitment – Partner support
Generation of situation reports and press release	– Feedforward and feedback – Public enlightenment and rumour/panic control	– Daily updates from states – Media support
Multi-sectoral collaboration	– Comprehensive and harmonized response	– Regular coordination meetings
CHALLENGES		
Challenges	Impact	Limiting Factors

Inadequate funding (in some states)	– Delayed response to outbreaks – Increased morbidity and mortality	– No dedicated budget line – Inadequate release of funds
Inadequate policies	– Increased morbidity and mortality – Reduction in hospital patronage	– Few existing policies from national – No domestication of existing policies – Out of pocket payment by patients
Inadequate human and material resources	–Poor/delayed response to outbreak – Increased morbidity and mortality	– Limited resources from state and federal government
No functional EOC in some states	– Delayed/poor response	– Poor commitment – Inadequate resources
Inadequate capacities at all levels	– Escalation of the outbreak – stigmatization	– Inadequate funding – Poor coordination
Inadequate preparedness	– Poor outbreak response	– Poor commitment from stakeholders – Poor political will

5.4 Surveillance

Best Practices	Impact	Enabling Factor
Enhanced community based surveillance	– Early detection and reporting – High index of suspicion – Timely reporting of cases	– Existing relationship with communities – Political support – Good communication with communities
Surveillance focal persons in health facilities	– Timely reporting of cases	– WHO initiative

Use of other established system for surveillance integration		– Human resources at all levels – Partner support
Contact Tracing	– Early detection of cases – Timely reporting of cases	– Involvement of communities in surveillance – Presence of volunteers from communities – Good communication with confirmed cases
Distribution of case definition in health facilities and communities	– Early detection of cases	– Support from partners
Deployment of SORMAS to some states	– Timely update of information – Quick and early decision making	– Support from partners – Presence of skilled workforce/ ICT personnel
Functional Rapid Response Team in states	– Timely response	– Existing EPR team – Presence of functional EOC
CHALLENGES		
Challenges	Impact	Limiting Factors
Poor preparedness	– Inadequate logistics – Poor/ delayed response	– Suboptimal political will – No financial benefit – No political benefit
Inaccessible budget line	– Delayed response and preparedness	– Bureaucratic bottleneck – Low priority on health – Low appreciation
Poor implementation of IDSR	–Poor/ delayed response and preparedness	– Focus on polio – LGA DSNO not trained in some states

	– Delayed detection	
Multiple reporting tools and channels	– Poor analysis – Inappropriate decision	– Complex data tool – Burden of task – Lack of commitment
Transportation	– Increase mortality and morbidity – Poor delayed response/preparedness	– No budget line for outbreak response /public health emergencies – Low appreciation of health
Overlap of TOR between RRT and LGA DSNO	– Poor delayed response/preparedness	– Political interference

5.5 Laboratory

Best Practices	Impact	Enabling Factor
Development of National Testing Algorithm for Lassa fever	– Improved quality of test result – Standardization of laboratory procedures	– Collaboration with Laboratory stakeholders led by NCDC/WHO – Regular supply of testing kits
Standardization of laboratory data template	– Harmonization of laboratory data	– Presence of EOC structure allowing for partner coordination
Capacity building of NRL staff by ISTH	– Improved turnaround time in decision making for outbreak response – Improved quality of result	– NCDC leadership and commitments – ISTH expertise – Willingness of NRL staff to learn from ISTH

	– Improved testing capacity	
NCDC-TRANEX sample transportation mechanism	– Early delivery of samples to testing laboratories	– NCDC leadership/stakeholder input – Cold chain equipment from routine immunization
Mapping of Testing Laboratories	– Increased proximity of states to testing laboratories – Efficient transportation of samples by courier company – Reduced workload at ISTH	– Increased testing capacity at NRL – NCDC co-ordination
CHALLENGES	IMPACT	LIMITING FACTOR
No SOP and system in place for sample transportation nationally	– Delayed result and response – Delayed case management – Poor sample quality	– Insufficient trained personnel – Incomplete filling of laboratory form
Reagent stock out	– Delay in testing – Delayed outbreak response – Delay in clinical management	– Delayed clearance by customs at the ports – Increased number of cases in the current outbreak than predicted – Improper management of inventory
Harmonization of laboratory and surveillance data	– Inconsistency in data compilation	– There was no standardized template for laboratory data at the initial stage □ Irregular meetings at NCDC between laboratory and surveillance Departments

Few Lassa fever testing laboratories in Nigeria	– Overwhelmed laboratories – Backlogs and delays in testing	– Absence of infrastructure, equipment and capacity of personnel – Low capacity of personnel with molecular testing and virology expertise
Power outage at ISTH	– Deterioration of laboratory reagents – Poor result quality	– No facility backup system – Unavailability of equipment protection for electrical gadgets s

5.4 Case management, IPC and Safe Burial

BEST PRACTICES	IMPACT	ENABLING FACTOR
Trained Lassa fever case management teams identified in the treatment centres	– Fewer health care workers exposed as dedicated teams were solely in charge of managing Lassa fever cases – Reduced the risk of transmission to other patients as identified teams were not involved in any other clinical activities – Improved case detections as the trained teams could follow the standard case definitions in identifying cases	– Top management involvement and commitment at the treatment centres – Partner involvement during the outbreak contributed to teams being identified, trained and re-trained.
Background: Due to the stigmatization that comes with having Lassa fever or been identified as a HCW that manages Lassa fever cases, some HCWs were not willing to take part in management of Lassa fever cases		

Synergy between state-owned and federal institutions in Taraba state	– Reduced loss to follow up of patients as two treatment centres were available for management of cases – Reduced community transmissions as patients could not go back to the community as they were transported to each facility – Reduced CFR because of early case management – Enhanced contact follow up	– Top management involvement and commitment at both hospitals
Background: Given the different levels of healthcare and responsibilities of government at different levels, State owned institutions and Federal owned institutions in the past have not shown a joint commitment in responding to outbreaks.		
Identifying a facility -based safe burial team in ABUTH, Bauchi State	– Increased co-operation from relatives – Containment of spread of infection from burial of confirmed cases	– Inclusion of religious leaders as members of facility-based safe burial team – Involvement of the deceased family at the onset in management of cases
Background: Reports from previous outbreaks revealed transmission of infections from corpses of confirmed cases during burial rites for the deceased. Family members have been known to take the corpses out of the health facility, before the State is made aware of the demise of a confirmed case of Lassa fever		
Availability and use of SOP for Lassa fever case management in BHUTH, Jos. Plateau state	– Improved patient outcome as approved guidelines were adhered to – Patients had less complications	– Collaboration with NCDC

	– Reduced hospital stay	
Motivation of Lassa fever case management teams in form of stipends in KSSH, Kogi State	– Increased motivation for HCWs to join in case management teams – Reduced stigmatization amongst HCWs	– Political will of the Kogi state government
ICU support for critically ill patients	– Reduced CFR – Improved patient outcomes	– Existing relationships between state government and supporting partners – Increased political will
Background: Complicated cases of Lassa fever had no access to intensive care as these facilities were not readily available in treatment centres. This contributed to mortality seen in previous outbreaks		
Citing of the laboratory services for supportive investigations in the isolation/treatment centres	– Faster clinical decision – Reduced exposure for laboratory staff in the general laboratory – Easier and better management of patients – Reduced turnaround time for supportive investigations	– Top management involvement and commitment – High level intervention through the emergency National Council of Health meeting for Lassa fever
CHALLENGES	IMPACT	LIMITING FACTORS

Stock out of consumables and supplies for Lassa fever case management e.g. Ribavirin, hand gloves in all treatment centres	– Delay in commencing treatment for patients – Poor patient outcomes – Increase in morbidity and mortality – Exposure to the HCWs	– Overwhelming number of patients seen in the outbreak; greater than was predicted
Background: Following the Lassa fever outbreak in 2017, NCDC made efforts to provide stock for supplies and consumables for the initial response; to enable states and treatment centres respond to an outbreak in the early phase of the outbreak. Distribution of these supplies was based on historic epidemiological data from States. However, the 2018 outbreak being the largest ever recorded led to rapid depletion of stock of supplies in treatment facilities within a very short time.		
Paucity of manpower in treatment centres	– Available HCWs were overwhelmed with high patient workload – Increased chances of HCWs getting infected due to fatigue and not following laid down procedures	– Lack of motivation for HCWs – Poor human resource for health planning
Increase turnaround time of retrieving confirmatory laboratory results affecting management of cases in ATBUTH, Bauchi State	– Delay in establishing a definitive diagnosis	– Bureaucracy/bottle neck in funding
Background: In Bauchi state, the state set aside funding for response to outbreak. When samples are to be sent for testing, it took a lot of processes to have fund released (3-4 days), thus delaying management of suspected cases		

5.6 Risk Communication and Social Mobilization

BEST PRACTICES	IMPACT	ENABLING FACTOR
Collaboration between States, NGOs and partners to reach larger community on Lassa fever awareness and sensitization	– Increase coverage and awareness in the state – Improved positive behavioural change – People reached now act as advocates	– Prior established relationship between state health educators and NGOs/partners – Involvement of NGOs and partners in planning and implementation – Regular meetings with NGOs and partners
Background: State health educators in Ekiti state had an advocacy to Balm of Gilead NGOs and established a relationship. The NGOs carried out awareness and sensitization to all schools and markets in Ekiti states. Meetings, planning and implementation phases involved state health educators and NGOs. Health educators in Ebonyi, Edo, Adamawa and Gombe states collaborated with WHO LGA officers and leveraged on available resources to carry out sensitization activities.		
Formation of community observers and monitors to ensure adherence to positive food handling and environmental sanitation	– Proper food handling and environmental sanitation – Community ownership and sustainability	– Active involvement and participation of community observers and monitors – Provision of enabling environment by government and community influencers to work with partners and NGOs
Background: In Ondo state, despite sensitization and awareness, members of community did not change their practice of spreading food stuff outside. The state health educators made advocacy visit to the community influencers which made the community come up with observers and monitors to enforce changes.		

Involvement of religious and traditional leaders in sensitization activities	– Increased awareness at grassroots – Prompt dissemination of information through involvement of religious and traditional groups – Rumours and misconceptions were easily debunked in timely manner	– Established relationship between health educators with religious and traditional leaders – Advocacy and sensitization to religious and traditional leaders – Distribution of communication materials to religious and traditional leaders
Background: In Gombe state, the state health educators conducted advocacy visits to 16 emirates and sensitized them on Lassa fever, this led to the selection of specific dates by each ward for environmental sanitation.		
Involvement of highly placed government and political officials as champions for Lassa fever communication	– Funds were released for sensitization in the LGAs – Town announcers were trained on key messages on Lassa fever – Increased awareness and acceptance	– Collaboration between State Ministry of Health and top government officials to prioritize health activities (synergy between the state risk communication group, social mobilization group and state government) – Availability of IEC materials in the state for sensitization activities – Popularity and acceptance of top government officials
Background/Narrative: During the outbreak, due to the effective advocacy to the state government, the Deputy Governor of Edo state took it upon himself ; to also involve religious, traditional and market leaders to champion risk communication activities on Lassa fever prevention and control in three (3) senatorial districts within the state. In addition, his involvement made it easier for funds to be released.		
Translation of jingles and IEC materials to local languages for effective reach	– Increased acceptance of messages	– Local language is widely spoken

CHALLENGES	IMPACT/S	LIMITING FACTORS
Inadequate involvement of state health educators in outbreak response	– Poor awareness about the disease contributed to limited behavioural change in communities –Inability of community members to promptly identify and report suspected cases – Poor and inappropriate health seeking behaviour	–Health educators prioritize immunization activities over outbreak response due to lack of budget line for health educators in response activities –Poor collaboration and information flow between the state epidemiologists and health educators
Late and inadequate logistics support for Lassa fever awareness creation	– Delay in information dissemination and awareness creation on LF – Poor health seeking behaviour	– Unnecessary bureaucratic bottle neck – Insufficient funds and logistic support –Late presentation of proposals by health educators to the state government
Irregular meetings with ward development committee (WDCs)	–Hard to reach areas are neglected	–Limited resources and logistic support (travel allowance, training materials, refreshment for training from states)
Limited cascading of training from state level to grassroot	– Knowledge gap and poor awareness of LGA health educators	– Lack of funds for training
Late and inadequate supply of IEC material	–Low knowledge and inadequate information in the community about Lassa fever	–Over dependence of states on NCDC and partners for production of IEC material – Inadequate funding at state level for production of IEC material and airing of health promotion messages

6. Key activities

The key activities are ordered based on priority by the group

Key activities identified were as follows:

ACTIVITY	Date of Desired Achievement	Responsible and Focal Point	Required Support	Indicators	Impact	Difficulty	Priority
Laboratory							
Training on data management for laboratory staff and all NCDC network laboratories	16th – 20th July 2018	Lassa fever TWG and partners	- Proposal - Budget - Development of training manuals - Venue - Logistics	- Number of people trained - Report of training	+++	++	10
Training and dissemination of SOPs on sample management in all states	September 2018	SMOH, Lassa fever TWG, Testing Labs.	- Provision of funds/logistics - Organize 3 day-training (hall identification, meals and per diem)	- Number (percentage) of adequate quality specimens	+++	++	11

			- Training materials - Adoption of SOPs by participants				
Develop a template and SOP for laboratory supplies inventory management system	August 2018	NCDC Lassa fever Laboratory TWG	- Workshop to develop template and SOPs - Review and finalization by laboratory team - Adoption, dissemination and training	- SOPs in place and in use in Lassa fever testing labs. - Template in place and in use	+++	+	2
Development of SOPs for sample transportation from health facilities to state capitals	September 2018	NCDC and SMOH	- Stakeholders meeting in each state to discuss specimen transportation - Identify funds at national and state levels - SOP development and dissemination	- Availability of SOP on sample transportation within states - Samples are transported using the system	+++	+++	4
Signing of MOU for Lassa fever network testing labs. and adoption of national testing algorithm	July 31st,2018	CEO NCDC and all Lassa fever testing labs.	- Agreed MOU - Printed SOPs - Meeting for signing of MOU and adoption of algorithm	- Signed MOU by each laboratory. - SOPs on national testing algorithm in use in the labs	++	+	2

Training on data management for Lab. staff at Lassa fever network labs.	July 16th – 20th ,2018	Lassa fever TWG	- Training module development - Agenda development - Training materials, per diem and travel arrangements for participants	- Number of participants trained - Training report	+++	++	10
Hands- on- training of Laboratory personnel on Lassa fever	September 2018	Irrua laboratory and NCDC TWG	- Identify staff from FETHA, LUTH and NRL Gaduwa for training - Develop training manual - Send invitation letters, logistic support (travel and per diem) - Procure reagents and consumables for training	- Number of Medical laboratory scientists trained from each facility/treatment centre - Number of specimen tested at FETHA and LUTH with national testing algorithm	+++	+	5
Identify and develop plans to build Lassa fever testing capacity in North east and North west zone	November 2018	NCDC director of Lab. services and Lassa fever TWG	- Scheduling advocacy visits to state government - Conduct needs assessment on selected laboratories. - Secure resources	- National testing laboratories for Lassa fever	++	+++	20

			- Procurement - Training				
Develop a road map for Lassa fever proficiency testing	December 2018	NRL Gaduwa and Lassa fever TWG	- Develop concept note - Hold a workshop to agree on a sample sharing mechanism and proficiency testing panel to be used - Form a committee to implement/refine strategic plans	- Committee formed - Road map developed	+++	+++	2
Case Management, IPC and Safe Burial							
Equip 3 treatment centers with ICU equipment to manage critically ill Lassa fever patients	November 2018	NCDC	- Need assessment of treatment centres by NCDC - Resource mobilization - Procurement of equipment and installation	- Three treatment centres equipped with ICU equipment	++	++	22
Identifying and training of relevant HCWs in	October 2018	Irrua Specialist Teaching Hospital,	- Development of training materials	- Number of HCWs trained on ICU care for Lassa fever	++	++	16

treatment centers on ICU care for Lassa fever		Edo State (Lassa Fever Centre)	- Identify resource persons - Logistics-Consumables for training, DSA, Tea break/Lunch, accommodation				
Identify and train IPC team/committee in the treatment centres	September 2018	NCDC, FMOH, SMOH	- Identify IPC teams/committees in all treatment centres - Develop TORfor IPC committee and team - Train IPC team Members	- Number of IPC teams identified and trained	+++	+	24
Identification of State and Treatment centre-based safe burial team and conduct a 2-day training on safe burial	October 2018	NCDC	- Development of training materials - Identifying resource persons - Logistics: training venue, funds, training supplies, accommodation, DSA	- Number of State teams identified and trained - Number of treatment centre-based burial teams identified and trained	+++	+	4

Engagement and training of HCWs on Lassa fever case management based on institutional needs (Treatment centre)	December 2018	FMOH and State governments (Recruitment department, NCDC, HEPR)	- Human resource needs assessment by treatment centre - Review of training materials - Logistics: training venue, funds, training supplies, accommodation, DSA	- 80% of all newly engaged HCWs in treatment centre trained	+++	++	11
Review and dissemination of national Lassa fever Case Management guidelines to 36 states and FCT	October 2018	NCDC (Lassa fever TWG)	- Identify members of expert review committee - Identify responsible persons for documentation of reviews Made - Meeting logistics- Meeting venue, DSA, Tea break /Lunch, Transportation, Hotel Accommodation	- Reviewed and disseminated guidelines to all 36 states and FCT			
Risk Communication and Social Mobilization							

Training of social mobilization officers across LGA in states	September 2018	SMOH	- Development of training materials - Meeting room, workshop materials - DSA, refreshment	- Number of social mobilization officers trained - Number of trained social mobilization officers who put training into use at LGA. (Monitoring and evaluation using template) - Number of trained social mobilization officers who send report on social mobilization activities carried out	+++	+++	1
Production of IEC material	August 2018	NCDC/SMOH	- Technical expertise, support to pre-test and translate materials - Meeting (Room, refreshment, and transportation	- Number of IEC materials produced - Number of local languages translated into pre-test report - Number of IEC materials distributed	+++	+++	2

Media Engagement	October 2018	SMOH	- Communication support to keep in touch with media personnel - Funds to conduct training - Secure meeting room and workshop supplies	- Identify and document media contacts - Conduct media training (orientation) - Dissemination of content to media outlet (advisories, press release, etc.)	+++	++	3
Conduct monthly review meetings with MDAs and partners	From July 2018, 2nd week of every month		- Support for refreshments during Meetings	- Update numbers and contact details of MDAs and partners in the States - Production and development of invitation to MDAs and Partners - Secure meeting venue and prepare meeting Agenda - Reports of meetings, action points and plan agreed on	++	++	4

Development of annual communication work plan on prevention, response and preparedness	September 2018	States	- Funds to support meeting - DSA, Hall rent, refreshment - Meeting materials	- Work plan development - Documentation of developed work plan exist - Timeline for monitoring work plan is developed	+++	++	5
Conduct a meeting to review social mobilization reporting template with State Health Educators	October 2018	NCDC	- Funds to support meeting - Logistics (DSA, meeting materials, venue and refreshment)	- A reviewed social mobilization template reviewed - Number of State Health Educators trained on how to use reporting template - Number of social mobilization officers using reporting templates	+++	+++	6
Conduct a one-day training of 40 community observers per LGA on prevention and control of Lassa fever	September 2018	State/ Local government	- Logistics (venue, hall rent, DSA, refreshment)	- Number of community observers trained			7

Carry out high level advocacy visit to policy makers, line ministries and stakeholders	Continuous	State/National	- Communication support - transportation	- number of advocacy visits done - number of policy makers and line ministers met	+++	++	8
Production of jingles	August 2018	NCDC/SMOH	- Funds to develop, translate and pre-test content, as well as finalize - Funds to air jingles	- Number of jingles produced - Number of jingles translated to local languages - Pre-test report - Number of slots for airing and numbers of jingles aired	+++	+++	9
Surveillance							
Designate surveillance focal person in all health facilities and community	August 31st ,2018	State DSNO	- Mapping of health facilities and communities - Funds - State Epidemiology team	- List of all communities and health facilities in the state - Updated list of designated surveillance focal person for all	+++	+	29

				communities and health facilities in the state			
Conduct IDSR training at all levels of the surveillance system: State and LGA level, health facility focal person and community informant	October 19th,2018	National: (Director Surveillance, NCDC) State: State Epidemiologist LGA: LGA DSNO	- National and state level TOT - LGA training (Health facilities and communities) Training materials, facilitators, logistics	- Number of persons trained - Number of trained conducted at each level	++	+	1
Mapping and sensitization of stakeholders and advocacy visits to them for partnership and collaboration (National and State)	July 31st,2018	State Epidemiologists	- Identification and listing of stakeholders - Advocacy visit to all identified stakeholders - State Epid. team - Transportation	- List of key stakeholders - Report on advocacy visit conducted - Number of advocacy visit conducted - Number of stakeholders identified	+++	+	5
Conduct data management and data use training at all level	October 31st ,2018	State Epidemiologists	- Identify personnel to be trained on data management - Training of identified personnel - Logistics (Facilitators, training materials)	- Number of personnel identified - Number of trainings conducted	+++	+++	13

Inaugurate/reactivate Epidemic Preparedness Response (EPR) committee at all levels	August 31st ,2018	Director of Public Health	- Identify and inaugurate EPR members - Identify and inaugurate RRTs - Orientation of EPR committee - Develop EPR plan - Funds	- EPR committee - RRT inaugurated - EPR plan developed	++	++	1
Designate and train Rapid Response Team (RRT) in all states	November 30th ,2018	NCDC and partners	- Identify RRT members - Conduct training for members at state and LGA level - Training materials - Facilitators - Logistics	- List of identified RRT members at state and LGA levels - Number of RRT members trained	+++	++	10
Advocacy visits to LGA lead to address overlapping functions between LGA DSNOs	June 30th ,2018	Director Public Health	- Book appointment - Advocacy visit - Transportation cost	- Report of advocacy visit - Minute of meetings	++	+	1
Distribute updated case definition to health facilities and committee	September 28th,2018	National Lassa fever TWG	- Update Lassa fever case definition (health facility & community)	- Updated health facilities and community	+++	+	1

before Lassa fever outbreak			- Produce case definition in different languages - Distribution to all health facilities - Funds	case definition for Lassa fever - Distribution of list to states, LGAs and health facilities			
Adapt data collection tools for Lassa fever	August 30th ,2018		- CIF and linelist - Harmonization of existing data tools - Production and distribution of tools - Funds	- Harmonization data tool - Feedback received - Distribution of list to States, LGAs and health facilities	++	+	1
Roll out of SORMAS	January 31st 2019	NCDC & Partners	- Training of key surveillance personnel - Develop roll-out plan - Conduct advocacy visit to states on SORMAS - Determined numbers of tablet to be procured - Mapping of network - Data bundle/sim cards	- Number of state with SORMAS fully deployed	++	+++	6

			- Tablets - Power banks - Facilitators				
Coordination and Logistics							
Generate costed Lassa fever preparedness plan	July 31st,2018	State Epidemiologist at State level and LF TWG lead at National level	- Steps - Situation analysis - Review and adopt national preparedness plan Resources needed: Funding - Facilitators - Training venue	- Costed preparedness plan	+++	+	23
Mobilization of resources and technical support from partners for Lassa fever preparedness and response	August 2018	State Honourable Commissioner of Health (HCH), CEO/Director General, NCDC	Steps: - Mapping of partners - Partners meeting - Training on fund mobilization resources - Meeting logistics	- Resources mobilized	++	+	9

Monthly coordination meeting with Lassa fever stakeholders in states and LGAs	3rd week of the month	Director Public Health/ Director Disease control	Steps - Generate a guest list - Meeting agenda Resources - Venue - Funds for transportation and stationeries	- Attendance - Minutes of meeting - Record of monthly meeting held	++	+	13
Conduct quarterly simulation exercise on Lassa fever preparedness and response	Last week of each quarter	Director Public Health / TWG Lead	Steps - Develop a simulation plan - Identify technical facilitators - Identify needs/requirement for Lassa fever simulation	- Number of simulation exercise conducted	+	++	8
Develop and adopt a policy for free care for all Lassa fever patients	July 30th ,2018	HMH HCH	Steps - Constitute an expert committee to develop and determine modalities for implementation Resources	- Availability of gazette/written policy on free Lassa fever care	+++	+++	7

			- Funds for stationeries and meeting logistics				
Setting up, training and reorientation of EOC personnel on roles and responsibilities	October 30th ,2018	Honourable Commissioner of Health, Director of Public Health State Epidemiologist	- Steps - Identification of physical location or EOC	- Physical structure of EOC in place - Number of EOC personnel trained	+++	++	9
Quantification and procurement of Lassa fever commodities	October 2018	State Epidemiologist Head of Supply chain management	Steps - Identification of resource needs - Collation of data from epidemiologist/surveillance - Forecasting of LF commodities Resources - Funds for procurement of identified commodities	- Quantity of commodity forecasted and procured	+++	++	8

Request for a logistics focal person to preposition and monitor Lassa fever commodities at national level	August 2018	Head Supply Chain NCDC	- Steps - Identification of Logistic focal person - Training of focal person on inventory management system	- Number of commodities prepositioned - Number of logistics focal person trained	++	++	5

			- Development of distribution chart - Printing and distribution of inventory management tool - Prepositioning of commodities	- Number of reports received			
Assign a logistic focal person to conduct prepositioning and monitoring of LF commodities at state and Local Government levels	August 2018	State Epidemiologist/ State Logistician	- Steps - Identification of logistic focal person in LGA - Training of logistics focal person on inventory management system at state and LGA level - Development of distribution chart - Prepositioning of LF commodities in LGA	- Number of commodities prepositioned - Number of logistics focal person trained - Number of reports sent/received	++	++	6
Conduct advocacy to stakeholders at the state level for resource mobilization	August 2018	HCH/DPH/IM/SE	- Notification letters requesting for time with Stakeholders	- Number of advocacy visits carried out	++	++	2

			- Draft work plan Resources - Advocacy kits	Number of pledges / commitment obtained			

7. Next steps

Following the completion of the above activities, states were grouped into four groups based on the burden of Lassa fever disease in the state and available facilities. The grouping helped generate specific activities based on the peculiarities of their respective localities. These activities are to be implemented /executed as shown in the state activities below (Annex 1)

- Follow up with states to assess the level of success following their planned activities during the AAR
- To intensify high level advocacy to HMH, HCH, NCH and the governor's forum to aid in early release of funds for states in need.
- To follow up on the final AAR report

8. Conclusions

Lassa fever is fast becoming an endemic disease in Nigeria, the 2018 Lassa Fever outbreak was the largest outbreak ever recorded in the history of Nigeria with confirmed cases as at May 2018 exceeding the total number of confirmed cases for 2017. The AAR and preparedness meeting availed participants the opportunity to appraise the response activities during the outbreak. The AAR was successfully conducted with active participation of all participants, stakeholders and partners and provided opportunity to share experiences, identify best practices, gaps and lessons learnt so as to strengthen subsequent preparedness and response measures. The implementation of agreed priority actions will be critical for improving future response to Lassa fever outbreak and other public health emergencies in Nigeria.

Annex 1: Post AAR action plan (for states)

Abia, Anambra, Delta, Imo, Ekiti and Osun States Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame	Comment
Surveillance	IDSR training for State and LGA DSNOs	Improve data collection and reporting	State DSNO	SMOH/SPHCDA		August, 2018	
Surveillance	Case Definition/data tools dissemination	Early detection/Timely reporting	State Epidemiologist/ State DSNO	NCDC/WHO		October, 2018	
Surveillance	Activate RRT at State and LGA level	Timely reporting/early response	State Epidemiologist/ State DSNO/ LGA DSNO	SMOH		July, 2018	
Surveillance	Roll-Out of SORMAS	Roll of programmes in the state	State Epidemiologist/ State DSNO	AFENET		July, 2018	

Risk Communication	Community sensitization in terms of rally, town hall meetings, community dialogues and engagement	Wider reach, positive behavioural change at the grassroots (Health seeking behaviour, proper food handling, personal & environmental sanitation etc.)	State Health Educator	WHO/UNICEF		October - December, 2018	
Risk Communication	Development, pretesting and printing of IEC materials including dissemination and distribution	Valid IEC materials distributed across LGAs	State Health Educator	SMOH/NCDC/ WHO		September, 2018	
Risk Communication	Media Engagement	Updated media database, trained media personnel, Improved relationship with media (Improved reporting and willingness to support awareness creation), and use of New media (Facebook, twitter etc.)	State Health Educator	SMOH/UNICEF		August, 2018	

Risk Communication	Production, translation and airing of jingles) Radio/TV phone in programme	Lassa fever messages aired across media platforms, better understanding of Lassa fever preventive and control measures, and improved knowledge and practices	State Health Educator	SMOH/UNICEF		August, 2018	
Risk Communication	Capacity building of LGA Health Educators & LGA Health Educators /SMCs	Pool of well trained and willing health educators across the State and accurate information is disseminated properly	State Health Educator	WHO		July, 2018	
Case Management/IPC/SB	Establish/Identify a treatment Centre based on Institutional needs	Established/Identified treatment centre	HCH	SMOH/NCDC/ MSF/ALIMA		December, 2018	
Case Management/IPC/SB	Engagement and Training of Health Care Workers on Lassa fever Case Management	Number of Health Workers trained	Director Public Health/State Epidemiologist	SMOH/NCDC/ WHO		August, 2018	

Case Management/IPC/SB	Training of Health Care Workers on IPC	Number of Health Workers trained on IPC and their directories	Director Public Health/State Epidemiologist	SMOH/NCDC/ WHO		August, 2018	
Case Management/IPC/SB	Establish/Identify and Train Safe Burial Team	Contacts of Safe Burial Team	State Epidemiologist/ State DSNO	SMOH		August, 2018	
Coordination	Conduct Monthly Coordination meetings for all Stakeholders on Lassa Fever	Availability of Minutes of meetings	State Epidemiologist	SMOH/WHO		July - December, 2018	
Coordination	Mobilization of Resources and Technical Support from partners to support Lassa fever preparedness and response	Number of partners for resource mobilization mapped	State Epidemiologist	SMOH		November, 2018	
Coordination	Quantification and procurement of Lassa fever Commodities	Availability of consumables at the state and LGA levels	State Epidemiologist	SMOH/WHO		November, 2018	

Coordination	Setting up, training and re- orientation of EOC personnel on roles and responsibilities	List of EOC member identified and trained, Availability of attendance list and minutes taken	State Epidemiologist	SMOH/NCDC		September, 2018	
Laboratory	Training and dissemination of SOPs for Sample Management in all States (Step down training)	1.Number of Laboratory personnel trained 2.Number of facilities with available SOPs	Laboratory Focal Person	SMOH/NCDC/ WHO		August, 2018	
Laboratory	Development of SOPs for sample transport from Health facilities to State Capitals	Availability of the developed SOPs at the State	Laboratory Focal Person	SMOH		October, 2018	

Bauchi State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame	Comment
Surveillance	Conduct IDSR training for all levels of the surveillance system(LGA,H/Facility and Community informants, and RRT)	1. Reorient LGA RRT members on their roles 2.Assign responsibilities to surveillance focal person for each health facility/community 3. Create a database for focal persons, names and phone numbers for each health facility	State epidemiologist/ LGA DSNO	WHO	???	10TH 07-2018	
	Update Lassa fever case definition and data collection tools	1. Produce case definition in Hausa	State epidemiologist	WHO		30th August,2018	
	Mapping of Surveillance Stakeholders and advocacy visit to partners and line ministries	Have the list of partners supporting surveillance in the State	State epidemiologist				

Social Mobilization	Training of Trainers of LGA Health Educators and LGA CEFPs with Stepdown training to existing Community resources groups	Pool of Educator for Community for awareness campaign on VHFs	SHE/SCEFP	MCSP/UNICEF		7/20/2018	
	Sensitization of religious and traditional leaders on Lassa fever /VHF in the seven affected LGAs	community ownership of sensitisation and preventive practices	SHE/SCEFP	MCSP/UNICEF		20th August 2018	
	Engagement of media on Lassa fever to support airing of jingles, phone in programmes and Radio discussions	Wider publicity on Lassa fever prevention	SHE/SCEFP/ I. O	MCSP/UNICEF		8th Sept.,2018	
	Development of Annual Risk Communication work plan on Lassa fever and other VHFs	State Risk Communication work plan developed	SHE/SCEFP	MCSP/UNICEF/SOLINA/ CHIGARI		6th July, 2018	
	Production, pretesting , translating and printing of IEC materials for distribution in local languages	Creation of more community awareness	SHE/SCEFP	MCSP/UNICEF		26th September, 2018	

Logistics and coordination	Generate a costed Lassa fever action plan	1. provision of equipment at treatment facility (stethoscopes, sphygmomanometers, thermometers, oxygen concentrators, beds, mattresses, tables and Chairs, computers for data management) 2. Provision of free management of Lassa fever cases in the State.	SE/RRT Chairman	MSF/CDC/WHO		20th August 2018	
	Forecasting and prepositioning of Emergency supplies	PPEs, Ribavirin, Chlorine, Knapsack sprayers	SE/ State logistician	MSFF/WHO		Sept,201 8	
	Conduct Monthly Coordination meeting for all stakeholders on Lassa fever		State epidemiologist	MSF/CDC/WHO/UNICEF		Ongoing	
Case management	Training for IPC Committee members at all level	1. Functional safe burial team and IPC committee at all level	DPH	Plan International			
	Provision of motivational support at treatment Centre (Hazard allowance	More freely willing and dedicated Staff at the treatment Centre	HCH/CMD	Any willing partner		During outbreaks	
	Training of Staff of the Treatment Centre on Case management and IPC	Skilled workforce at the treatment centre	Lead Physician on Case Management	MSFF/WHO			
Laboratory	Provide triple packaging materials	Safe shipment of samples		WHO/MSFF		16th Oct., 2018	

	provide funds for sample transportation from LGAs	Early movement of sample to State Lab	State Public Health Lab Scientist	WHO		July, 2018	
	Provide urinalysis strips, PCV/Hb kits and glucometer	Conduct preliminary investigations		MSFF/WHO		October 5th ,2018	

Benue State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame	Comment
Coordination & Logistics	1. Develop costed plan for Lassa fever preparedness at state and LGAs	1. A state specific EPR plan developed.	State epidemiologist	WHO, NCDC, SMOH		31st- July-2018	Benue State
	2.Setting up, training of personnel of EOC on roles and responsibilities	I. EOC identified. II. EOC equipped. III. EOC personnel trained		WHO, NCDC,		18-Oct-2018	Benue State

	3. Monthly coordination of meeting for all stakeholders at state and LGAs					3rd Week of every month	Benue State
	4.Conduct simulation exercise on Lassa fever preparedness					Twice a year	Benue State
	5. Quantification of resources and technical support for partners	I. Identification and training of state logistic focal persons. II. Forecasting. III. Pre-positioning and distribution on commodities. IV.LMIS report	State epid/ State Logistics Focal Persons	WHO,NCDC		18-Aug-18	Benue State
Surveillance	6.Conduct IDSR training at all levels of surveillance state HF and community informants		State DSNO	NCDC		Nov, 2018	Benue State

CM/IPC/SB	7.Identify and train IPC team/ committee on treatment centres FMC and BSUTH			WHO,NCDC		18-Sep-18	Benue State
	8. Equip 2 treatment centres with ICU equipment to manage LF cases			WHO,NCDC,SMOH		18-Oct-18	Benue State
	9. Identify and train relevant HCWs in ICU care for LF					18-Oct-18	Benue State
Laboratory	10. Training of MLS and dissemination of SOPs for sample management			NCDC, FMOH, SMOH		18-Sep-18	Benue State
Risk Communication	11. Community Sensitization		SHE			5-Oct-18	Benue State

	12. Development and production of state specific risk communication plan	One specific risk communication plan developed, printed and ready for use	SHE	WHO		21-Nov-18	Benue State
	13. Train 23 SMOs on Lassa fever risk communication	23 SMOs trained on LF risk communication	SHE	WHO,UNICEF		8th- Oct- 18	Benue State
	14. Produce, pretest, translate, and air Jingles in all local languages in the state	Jingles produced, pre tested and aired in major local languages and aired	SHE	UNICEF		31st-July- 2018	Benue State
	15. Train 277 ward focal person on Lassa fever risk communication	277 Ward focal persons trained	SHE	UNICEF		18th Oct- 2018	Benue State

Edo, Ondo and Ebonyi States Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame	Comment
Coordination	1.Costed preparedness pans produced	Costed preparedness plan produced	State epidemiologist	WHO NCDC	???	31-Jul-18	
	Monthly Coordination Meeting For All Stakeholders On Lassa Fever At The Statet And LGA	1. Attendance list 2. Minutes of meeting 3. Number of monthly meeting held	1. DPH 2. DDC 3. SE	WHO NCDC		2nd of Every Month	
	Resource mobilization from partners	1.No of partners identified 2. Minutes of meeting and attendance list 3.List of resources mobilized	NCDC CEO DPH SE	NCDC WHO		Aug-18	
	Quantification And Procurement Of Lassa Fever Commodities	1. Quantities Of Lassa fever commodities Procured	1.SE HEAD OF SUPPLY CHAIN	NCDC WHO		Oct-18	

Surveillance	UPDATE LASSA FEVER CASE DEFINITION AND DATA COLLECTION TOOL	1. HEALTH FACILITIES WITH CASE DEFINITION		WHO		31st August 2018	
	Conduct IDSR Training For All Levels Of Surveillance System in all State, LGA, Health Facilities And Community Informants	Number Of Personnel Trained		WHO		Oct-18	
Risk Communication	Development of Annual Communication Work Plan For Prevention Response And Preparedness On Lassa	1.STATE RISK COMMUNICATION WORK PLAN DEVELOPED WITH INVOLVEMENT OF RELEVANT STAKEHOLDERS	SHE	WHO		Sep-18	
	Training Of LGA Health Educators On Lassa Fever Prevention And Control	1.Number Of Health Educators Trained	SHE/STATE TEAM	WHO		Sep-18	
	Develop, pre-test, Translate And Distribute IEC Materials In. Indigenous Languages	Increased awareness on Lassa fever created	SHE/STATE TEAM	WHO		3rd Sept 2018	

	Jingles production and awareness	Awareness created					
	Community sensitization, community dialogue, town hall meeting	Increased awareness on Lassa fever		1. SHE 2. LGA HEALTH EDUCATORS		OCTOBER 2018-APRIL 2019	
	Media orientation /sensitization (print and electronic meetings)	Media capacity built on Lassa fever prevention and control key messages	1. SHE 2. State team			October 2018 – April 2019	
Laboratory	HANDS ON TRAINING/RETRAINING OF LAB PERSONNEL AT IRRUA FOR LASSA FEVER	CAPACITY OF LAB STAFF BUILT AND ENHANCED	1.LASSA FEVR 2.TWG AND IRRUA LAB			Sep-18	1. Provision Of Funds For Logistics 1.Training Manual 3.Identification Of Lab Staffs To Be Trained
	TRAINING ON DATA MANAGEMENT FOR LAB STAFF AND LASSA FEVER NETWORK	HARMONIZATION OF LAB DATA REPORTING AN ANALYSIS	1. NCDC 2. TWG			Jul-18	1.DEVELOPMENT OF TRAINING MODULES 2.BUDGET AND VENUE

	Training and dissemination of SOPs for Sample management in the state	INCREASED % IN QUALITY SPECIMEN	SMOH,TESTING LAB,TWG			Sep-18	1. PROVISION OF FUNDS FOR LOGISTICS 1.TRAINING MANUAL 3.IDENTIFICATION OF HALL
Case Management/IPC/SB	EQUIP THE INFECTION CONTROL CENTRE FMC OWO WITH ICU EQUIPMENTS TO MANAGE CRITICALLY ILL LASSA FEVER PATIENTS	NEEDS ASSESSMENT OF ICC FMC OWO RESOURCE MOBILIZATION	NCDC SMOH FMC OWO	TO BE IDENTIFIED BY NCDC TO JOIN		Sep-18	IMPROVE PATIENT CARE REDUCE CFR IMPROVE CAPACITY
	TRAIN RELEVANT HCWs ON ICU OF LASSA FEVER PATIENT management	FREE TREATMENT FOR ALL LASSA FEVER PATIENTS					
	IDENTIFY AND TRAIN IPC TEAM OR COMMITTEE IN ICC FMC OWO	DEVELOPMENT OF TOR FOR IPC COMMITTEE AND TEAM DEVELOPMENT OF TRAINING MATERIALS	SMOH ICC FMC OWO			Jul-18	

	Identification Of State And Facility Based Safe Burial Team And Conduct A 2 Day Training On Safe Burial	production of training materials identification of resource, persons and logistics	ICC FMC OWO				
	Free Treatment For All Suspected And Confirmed Cases	Estimate Cost Of Treatment For 150 Confirmed Cases And 500 Suspected Cases	State Epid Lassa fever Case Ngt. Committe E	ALIMA NCDC		Dec-18	
	Build And Equip A Functional Bio Safety Level 3 Laboratory			NCDC STATE GOVT	NCDC TO IDENTIFY	Dec-18	

Gombe State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame	Comment

Coordination & Logistics	1. Develop and produce EPR plan for state.	1. A state specific EPR plan developed.	State epidemiologist	WHO, NCDC, SMOH	???	27-Aug-18	Gombe State
	2.Develop and produce a costed surveillance plan for the state	2. A costed surveillance work plan for 2019 developed and printed		WHO, NCDC, SMOH		28-Sep-18	Gombe State
Surveillance	3.Conduct IDSR training for all organs of the surveillance system. (EPRC Orientation, RRT, State epidemiologist, LGA DSNOs, LF focal persons & community informants}	1. State EPRC members' orientation. 2. RRT and state epidemiologist trained. 3. LGA DSNO trained 4. Surveillance focal person and community informants trained	State epidemiologist	WHO, NCDC, SMOH		30-Oct-18	Gombe State
CM/IPC/SB	4. Train 100 HCWs of case management on Lassa Fever 5	1.Number of HCWs trained on case management.	Lead physicians for LF case management	WHO,NCDC		28-Sep-18	Gombe State
	5.Conduct IPC training for 30 HCWs and all private clinics	2. Number of HCWs trained on IPC	Lead physicians for LF case management	WHO,NCDC		28-Sep-18	Gombe State

Laboratory	6. Train 30 MLS on sample collection and management.	1.30 MLS trained on sample collection and management.	State surveillance/ laboratory Focal persons	WHO,NRL		30-Oct-18	Gombe State
	7. Distribute SOPs on sample management	2. SOPs on sample management distributed to all laboratories in the states	State surveillance/ laboratory Focal persons	WHO,NRL		30-Oct-18	Gombe State
Risk Communication	8. Develop and produce state specific Risk Communication plan	I.State specific LF risk communication plan	State Health Educator	WHO, UNICEF, SMOH		5-Oct-18	Gombe State
	9. Train 30 State mobilization Officers on LF risk communication	II. 30 SMOs trained	State Health Educator	WHO, UNICEF, SMOH		19-Oct-18	Gombe State
	10. Train 120 ward focal persons on LF risk communication	III. 120WFPs trained	State Health Educator	WHO, UNICEF, SMOH		26= Oct- 18	Gombe State

Kaduna State Plan

Pillar	Activities	Expected Outcomes	Responsible Persons	Partners	Cost	Time Frame

Surveillance						
1	To conduct IDSR training for HCWs at all levels of the surveillance system (State, LGA, HF and community)	Number of trainings conducted, Number of HCWs trained	State Epidemiologist	WHO		15th Aug-7th Sept 2018
1.1	To appoint additional focal persons for reporting of IDSR diseases including VHF	Number of additional focal persons appointed	State Epid/State DSNO	WHO		2nd Aug-10th Aug 2018
1.2	Obtain and distribute Lassa fever case definition data tools & Posters to all HFs in all LGAs	No of case definition forms/posters obtained and Distributed	State Epid/DSNO/WHO surveillance focal person	WHO/AFENET		8th Sept-10th sept 2018
1.3	Print & distribute IDSR technical guidelines and TORs for IDSR and surveillance to all LGAs	Number of IDSR technical guidelines printed/distributed	DPH/State Epid	WHO/FMoH/NCDC		11th-15th September 2018
1.4	Conduct a one-day zonal training in 3 zones on IDSR for HCWs in all Public & Private facilities	No of HCWs trained	State epid/DSNO	WHO/FMoH		10th-15th August 2018
1.5	Generate a costed Lassa fever Annual	Availability of a costed Lassa Fever AoP	DPH/State Epid/DSNO	WHO/FMoH		2nd-7th August 2018

	operational and preparedness plan					
1.6	Advocacy to Policy makers; Governor, Commissioner e.t.c	No of advocacy visits conducted	DPH/HC/State Epid	WHO/UNICEF/AFENET/CDC-NSTOP/BMG/CHAI/MNCH2		25th July - 1st August 2018
1.7	Conduct Monthly surveillance review meetings with DSNOs, aDSNOs, Focal persons involved in VHF data management	No of Monthly surveillance meetings conducted, Number of surveillance officers present	State Epid/DSNO	WHO/SPHCDA		2ND July 2018-Dec 2018
COORDINATION/Logistics						
2.1	Generate a costed Lassa fever Annual operational and preparedness plan	Availability of a costed Lassa Fever AoP	DPH/State Epid/DSNO	WHO/FMoH		2nd-7th August 2018
2.2	Conduct monthly coordination meetings for all stakeholders on Lassa Fever (State/LGA)	No of meetings conducted, No of stakeholders present	DPH/State Epid/DSNO	WHO		3rd July- 6TH July 2018
2.3	Mobilization of resources & technical support from partners to support Lassa fever preparedness & response	List of resources mobilized	DPH/State Epid	WHO/NCDC/AFENET/CDC-NSTOP/UNICEF		7th July- 10th July 2018

2.4	Integrate the State EOC to include all IDSR diseases including VHF preparedness/response	Existence of a fully functional/integrated EOC	ES/DPH/HC	WHO/NCDC/AFENET/CDC-NSTOP/UNICEF		3rd July 2018
2.5	Quantification, procurement and distribution of Lassa fever commodities	Quantity of Lassa fever commodities procured & distributed	State Epid	WHO		12th – 17th July 2018
Risk Communication /Social Mobilization						
3.1	Develop an annual communication work plan on prevention, response and preparedness on Lassa fever	Annual communication work plan developed	Health Educator	UNICEF/WHO		27th June-2nd July 2018
3.2	Conduct one-day sensitization meeting with traditional/religious leaders on Lassa fever preventive Measures	No of sensitization meetings conducted, No of religious/religious leaders present	Health Educator	UNICEF/WHO		20th July, 2018
3.3	Conduct one-day orientation meeting with media health correspondents on Lassa fever preventive Measures	Number of meetings conducted, Number of media health correspondents present	Health Educator	UNICEF/WHO		2nd August ,2018

3.4	Conduct 2 day orientation meeting with 23 LGA health educators on VHFs	Number of meetings conducted, Number of LGA health educators present	Health Educator	UNICEF/WHO		15th to 16th August, 2018
3.5	Conduct monthly meeting with Health educators on emergency preparedness risk communication activities	Number of LGA health educators present	Health Educator	UNICEF/WHO		20th Augut,2018
3.6	Design, print and distribute IEC materials in English and Local Languages	Number of IEC materials designed, printed and distributed in English and Local Language	Health Educator	UNICEF/WHO		25th to 30th Sept,2018
3.7	Conduct monitoring & supervision on risk communication activities on VHFs	Number of monitoring and supervision conducted	Health Educator	UNICEF/WHO		30th July to 30th Dec, 2018
Case Management/IPC/SB						
4.1	Equip Infectious Disease Control Center (IDCC) with ICU equipment to manage critically ill Lassa fever patients	Number of equipment procured	DMS/DPH	WHO		30th Sept to 30th October, 2018
4.2	Train HCWs at Kakuri IDCC and Tertiary HFs on ICU care for Lassa fever	Number of HCWs trained	DMS/DPH	WHO, UNICEF,AFENET		20th to 23rd July,2018

4.3	Identify and train IPC teams/committees in all isolation sites (High/Low level sites)	Number of IPC teams/committees identified & trained	DMS/DPH	WHO		1st to 3rd August,2018
4.4	Conduct zonal Infection Prevention/ Control Training for HCWs from Public and Private Health facilities in 3 zones	Number of HCWs trained	DMS/DPH	WHO		6th to 8th August, 2018
Laboratory						
5.1	Set up and equip a standard Laboratory within the Infectious Disease Control Center (IDCC)	Standard Laboratory set up and equipped	Laboratory Focal Person	WHO		30th Sept to 30th November, 2018
5.2	Procure and install accessories for thermal cycler machines for testing	Number of accessories procured and installed	Laboratory Focal Person	WHO		25th August to 30th October, 2018
5.3	Train Laboratory personnel in the use of standardized reporting tools, Sample management and testing for LF	Number of Laboratory personnel trained	Laboratory Focal Person	WHO		8th to 11th August, 2018
5.4	Train Laboratory focal persons in sample management and transportation using the approved courier (Tranex)	Number of Laboratory persons trained	Laboratory Focal Person	WHO		24th to 27th Sept, 2018

5.5	Design, Print and distribute SOPs on Laboratory practices and procedures	Number of SOPs designed, printed and distributed	Laboratory Focal Person	WHO		5th to 10th October,2018
5.6	Procure and distribute Laboratory commodities to diagnostic sites and Lab focal persons	Number of Laboratory commodities procured and distributed	Laboratory Focal Person	WHO		25th to 30th August, 2018

Adamawa State

CO-ORDINATION	Activities	Expected outcomes	Responsible Persons	Partners	Cost	Time line
1.1	Develop and Adopt policy on free treatment of Lassa fever patients.	Policy on free treatment of patient on Lassa fever developed	EOC IM and SE	WHO , UNICEF		15-08-2018
1.2	Training and reorientation of EOC pillar heads	Pillar heads Trained	EOC IM and SE	NCDC and WHO		1/7/2018
1.3	Advocacy for resource mobilization for Lassa fever	Fund for Lassa fever response mobilized	Commissioner SMOH/ SE			Oct-18
CASE MANAGEMENT						
1.1	Identification and training of relevant health care workers on Lassa fever at the Isolation Centre	Health care workers identified and trained				
1.2	Identification and equipping of Isolation Unit in the treatment Centre	Isolation identified and equipped	SMOH	WHO, UNICEF,ICRC,		Nov-18
LOGISTICS						
1.1	Forecasting and prepositioning of emergency health Commodities	Drugs /commodities prepositioned	State Epidemiologist	NCDC and WHO		30th Sept 2018

RISK COMMUNICATION						
1.1	Conduct meeting with Key religious and traditional leaders in the state on LF	Religious and Traditional leaders sensitized on LF prevention and control	State Health Educator and SE	UNICEF and Society for Family health		20th October 2018
1.2	Conduct high level advocacy to Line Ministries (Environment Agriculture ,Information ETC) for collaboration on LF response	Collaborative relationship built among SMOH and line ministries on LF Response	State Health Educator and SE	UNICEF and Society for Family health		10TH NOVEMBER 2018
1.3	Conduct One day orientation meeting for Health Educators in the all the LGA on communication skills and health education strategies on LF	Knowledge of health educators on LF updated.	State Health Educator and SE	UNICEF and Society for Family health		20th November 2018

Kogi State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame
Surveillance	Appoint a surveillance focal point in each health facility	1. Hold an outreach meeting with each DSNO 2. Provide funds to each LGA to conduct a training program for a selected surveillance focal points from each health facility 3. Create a database with the focal person names and phone numbers, with each health facility	State epidemiologist	WHO		20-Jul-18
Surveillance	Identification and training of disease surveillance focal persons in all registered health facilities in Kogi state on IDSR	1. Establish a comprehensive data base of all focal persons. 2 improved case detection rate in Kogi State. 3. 80% of focal persons in the state trained	State epidemiologist	WHO		30/11/2018
	Training of all the RRT in all the 21LGAs of Kogi state	1. improved case detection rate in Kogi State. 2. 100% of RRT in the state trained	State epidemiologist	WHO		30/10/18
	Production of data tools and case definitions update	readily available tools for trainings and use in all health	State epidemiologist	WHO		31/8/2018

	training of 42 health educators in all the 21 LGAs of Kogi state(2/LGA) on Lassa fever sensitization measures	42 health educators trained 2. improved of health educators on sensitization Lassa fever	state health educator	WHO		30/9/18
	Community sensitization and engagement in all the at risk LGAs in Kogi (Idah, Ajaokuta, Ibaji, Olamaboro, Okene)	Improved community awareness on lassa fever	state health educator	WHO		31/9/18
Risk communication	Production of IEC material	Availability of IEC materials (in English, Pidgin, Igala, Yoruba, Hausa, Gassa, Nupe and Ebira) in most communities in LGA	state health educator	WHO		31/8/18
	Production of TV/ radio jingles, articles for dissemination in newspapers and social media platforms, media interviews in the7 predominant local languages in the state	Increased sensitization on Lassa fever across Kogi state.	state health educator	WHO		31/7/18
Laboratory	2-day training of laboratory focal persons in all the secondary and tertiary health centres in Kogi https://data.ncdc.gov.ng State on sample collection, transportation and management.	1. build capacity of lab staff in the state on effective sample management.	lab focal person	WHO		30/10/18

	2. dissemination of SOPs on sample management.	2. availability of SOPs in all the labs in Secondary and tertiary health institutions	lab focal person	WHO		30/10/18
Coordination	1. Generate/ develop a costed work plan for Lassa fever outbreak response1.	better preparedness for outbreak1.	State epidemiologist	WHO		31/7/18.
	2. Monthly meeting of stakeholders (3rd week of every month).	2. Ensure stakeholders' participation	State epidemiologist	WHO		8/2/2018
	3. advocacy to major stakeholders (governments, partners, NGOs) for resource mobilisation.	3. availability of resources for outbreak response.	State epidemiologist	WHO		8/3/2018
	4. appointment of logistic focal/ quantification and procurement of lassa fever response commodities.	4. availability of commodities and better logistics.	State epidemiologist	WHO		10/4/2018
Case Management/IPC/SB	1. Training of all personals working at the treatment centre	capacity building of all personnel on lassa fever case management	state epidemiologist	WHO		31/8/2018.
	2.IPC trainings for focal person in all secondary and tertiary health institutions in the state.	2. capacity building of IPC teams in secondary and tertiary health facilities in Kogi State.	state epidemiologist	WHO		9/30/2018
	3. identification and 2-day training of safe burial teams at the state level and at the secondary and tertiary care facilities	3a. establish comprehensive data base of all safe burial teams in the state. capacity building of safe burial teams in secondary and tertiary health facilities in Kogi State.	state epidemiologist	WHO		10/1/2018 0:00

Nasarawa State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame
Case management/ IPC/SB	Identification & training of 10 HCW in ICU care for LF & creating a specific intensive care unit for LF	Room Identified,10 HCW trained on ICU care	NSG NCDC/Irrua	NCDC/WHO		Nov-18
	Identify 1 Focal person at Ministry & 4 per General Hospital (72) & Training of focal person & IPC committee (20) within the Ministry state & General Hospital	Trained personnel & step down training done	SMOH FMOH NCDC			Sep-18
	Conduct two days training on Safe burial	Improve safe Burial practices of Religious & Traditional Leaders	SMOH FMOH NCDC	NCDC/WHO		Nov-18

Risk communication	Orientation of 10 media Officers	10 media officers trained				
	Identify & train 1 community observers per ward on VHFs	147 observers trained				Sep-18
	To conduct 1 day training of 26 no LGA Health Educators/ Assistants.	26 Health Educators trained				Sep-18
Epi surveillance	To update LF case definition & data collection tools	All RRT members trained, All focal persons trained	NCDC			Aug. 2018
	Train RRT members at State & LGA levels		NCDC WHO			Aug. 2019
	To conduct IDSR training for all newly identified SFP at HFs	2. Provide funds to each LGA to conduct a training program for a selected surveillance focal point from each health facility 3. Create a database with the focal person names and phone numbers, with each health facility	SE WHO			Jul-18
Laboratory	Training of 10 Lab personnel on sample collection & handling					Jul-18

	Distribution of SOPs					
Coordination & Logistics	To set up EOC, identify and train members on role & responsibilities	EOC office in place, No of EOC participants trained				Oct-18
	To quantify & procure LF commodities	Identification of commodities, forecasting & procurement	SE, Head of supply chain			Oct-18

Plateau State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame
Surveillance	Conduct 3 day IDSR Training in 10 LGAS (10 Health care workers per LGA)	1. 100 Health care workers trained on case detection and reporting of Lassa fever and other priority Diseases	State epidemiologist	WHO	???	20-Jul-18
Surveillance	zzzzzzzzzzzupdate Lassa Fever case definition and produce updated CD and Data collection tools	1. Updated case definitions in health facility and communities. 2. Available CDs in English and Hausa languages in the State. 3. Availability of Data tool in the State	NCDC (Dir. Surveillance)			8/31/2018

	Conduct training of IDSR data management and use at all levels of surveillance system (SE, SDSNO, LDSNO, CM, HFFPs, CINF, RRTs)	1. Trained Surveillance system in the State. 2. Adequate use of data tools	NCDC/SE	WHO		8/31/2018
	Conduct State review meetings monthly for surveillance Stakeholders	1. Monthly meetings held at State level. 2. Monthly meetings held at LGA levels	State epidemiologist	WHO		8/30/2018
Risk Communication	Advocacy to five(5) media houses to be engaged in Lassa fever public enlightenment	1. Five (5) media houses advocated to 2. Orientation meeting held with the media houses. 3. Messages on Lassa fever aired	State epidemiologist	UNICEF		8/30/2018
	Orientation meeting with LGA Health educators on Lassa fever	1. 17 LGA Health educators updated on current information of Lassa fever. 2. LGA Health educators equipped with LF communication skills	State Health Educator			9/30/2018
	Advocacy to Line Ministries on Lassa Fever	1. Five (5) line ministries advocated to on Lassa fever outbreak. 2. The line ministries are supporting in Lassa fever prevention	ES PHCB SOC. MOB TEAM	UNICEF		6/30/2018

Case Management/IPC/SB	Establishment of holding areas for suspected Lassa fever cases in Health facilities in the State and IPC team	1. Three major HFs (BHUTH,JUTH,PSSH), holding area established. 2. Those holding areas should be able to observe IPC activities. 3. Trained case managers and IPC teams on best practices	IPC Committee	NCDC		7/31/2018
	Establishment of designated treatment centers for Lassa fever and other VHFs	1. Three designated treatment centers established. 2. Reduction in case fatality rate in the State	HCH	NCDC		12/31/2018
Laboratory	Development of SOPs for sample transportation from Health facility to State capital	1. Appropriately package samples delivered at the State capital and reference laboratory. 2. Appropriate sample handling	NCDC NRL Gaduwa	NCDC		7/31/2018
Coordination	Generate a costed Lassa fever preparedness plan	A costed Lassa fever preparedness plan before the next outbreak season	State epidemiologist			9/30/2018
	Conduct quarterly meeting of EPRL, two meetings from now to December	Minutes of EPRC meeting held	HCH			12/31/2018
	Qualify and procure Lassa fever commodities for the state	1. Availability of PPEs in the treatment centers. 2. Prepositioned Ribavirin at the treatment center	PS			12/31/2018

Rivers State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame
Surveillance	Conduct 3 day IDSR training	100 health care workers trained on case detection and reporting of lassa fever and other priority diseases	State epidemiologist	WHO	???	20-Jul-18

	Conduct 3 day IDSR training for all levels of the surveillance system(State, LGA, Health facility focal persons and community informants) - RRT (State and LGA)	4 state personnel trained on IDSR. 23 LGA DSNOs trained on IDSR 141 focal persons trained on IDSR 319 Community informants trained	State epidemiologist	WHO		30th November, 2018
	Update Lassa fever case definition and data collection tool	Updated lassa fever case definition produced Harmonized data tool produced Number of case definition and data tools distributed	State epidemiologist	NCDC		31st August 2018
	Train RRTs in all the LGAs	23 (MOHs, DSNOs, LIOs, Lab personnel, Health Educators) each trained on response to Outbreaks	State epidemiologist / Director Disease Control PHCMB	WHO		15th Dec. 2018
Laboratory	3 day Hands on training of Lab. Personnel at IRRUA for Lassa fever for UPTH virology staff and BMSH staff	Staff trained on Lab	Lassa fever TWG	IRRUA Lab		Sept. 2018
	2 day Training and dissemination of SOPs for sample management in all LGAs	SOPs distributed to all Labs at the LGAs	Lassa fever TWG	UPTH, BMSH		

Case Management/IPC/SB	Identify and train IPC teams/Committee in all health facilities	50 persons from the secondary health facilities	DPH	NCDC		Sep-18
	Training and retraining of Health care workers at the treatment centre	30 personnel trained	DPH	NCDC/IRRUA		
Coordination	Mobilization of resources and clinical support from Partner to support LF preparedness and response	prepositioning of resources	Hon. Commissioner Director Public Health	NCDC		Aug-18
	1 day TWG meeting to generate a costed Lassa fever preparedness plan	costed Lassa fever preparedness plan produced	TWG			31st July 2018
	Monthly coordination meeting of all stakeholders	Stakeholders updated on Lassa fever issues	DPH			Monthly

Risk Communication	Conduct 2 Days Meeting with LGA SMOs and other relevant Stakeholders and Partners on the development of crisis communication work plan on Prevention Response and preparedness on VHD	Developed Risk Communication plans in State and LGAs	SHE	UNICEF		August, 2018
	Conduct one Day Capacity Training of 20 Community Engagers on IPCs per LGA for 23 23 LGAs and 23 LGA SMOs on prevention and control of VHDs	46 Community Engagers trained in IPC and 23 LGA SMOs on Message dissemination	SHE	UNICEF		September, 2018
	Hold one Day orientation meeting with 20 Media Stakeholders on accurate Messaging , Airing of Jingles and Press releases on Lassa Fever	Free slots of Lassa fever Messages Phone-in programme Aired messages at reduces cost	SHE	State		October, 2018

Taraba State Plan

Pillar	Activities	Expected outcome(s)	Responsible Persons	Partners	Cost	Time-Frame
Surveillance	Conduct 3 day IDSR Training in 10 LGAS (10 Health care workers per LGA)	1. 100 Health care workers trained on case detection and reporting of Lassa fever and other priority Diseases	State epidemiologist	WHO	???	20-Jul-18

	identify and equip a treatment facility with ICU care	Train relevant HCW on ICU care	FMoH, SMoH	NCDC, WHO		10/30/2018
	Identify and train IPC teams and develop a consortium for two(2) treatment centers		FMoH, SMoH	NCDC		9/30/2018
	Identification of a safe burial team in existing facilities					
Case Management/IPC/SB	Rehabilitation of Taraba State specialist hospital Lassa fever treatment centre		SMoH	NCDC		8/30/2018
Risk Communication	Identify and train Forty (40) community observers = 640 persons in 16 LGA		SHE, SMoH	NCDC, WHO		9/30/2018
	Development of annual communication work plan		SHE, DSNO	NCDC, WHO		8/30/2018
	Quarterly sensitization of religious and traditional rulers		SHE, DSNO, EPID	WHO		Quarterly from July

Coordination & Logistics	Generation of costed Lassa fever preparedness plans					7/30/2018
	Monthly coordinated meeting of all Stakeholders		SE, DPH	NCDC		
	Mobilization of logistics and technical support					
	Simulation exercises on Lassa fever Twice a year in 3 senatorial district		SE, DPH, Lead Team			
Surveillance	Conduct IDSR training in all levels of surveillance			NCDC		8/31/2018
	Mapping of surveillance Stakeholders and advocacy visit					
Laboratory	Identify and develop plans to build Lassa Fever capacity in NE					11/30/2018
	Training on data management for two(2) lab staff at Lassa fever network					
	Training and dissemination of SOPs					9/30/2018

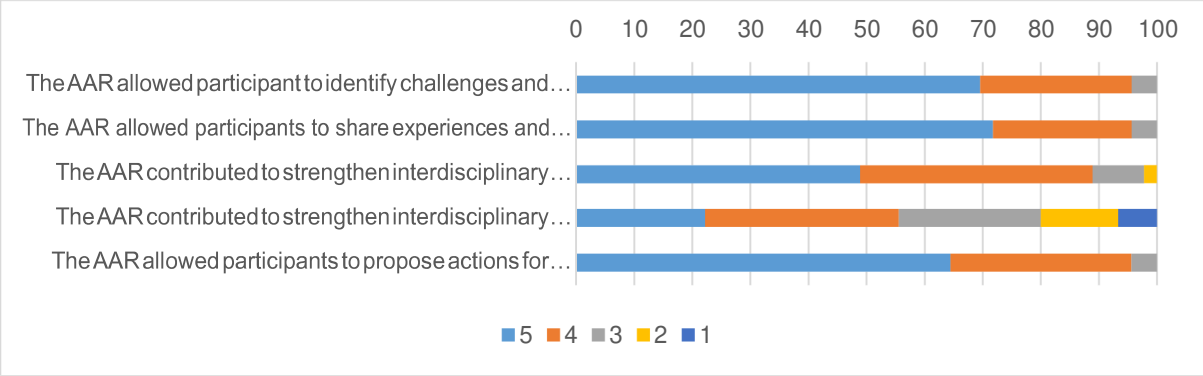
Annex 2 - Evaluation of AAR workshop by participants

About 46 participants completed the evaluation questionnaire for the workshop and the results from the survey are as follows:

On a scale of 1 (fully disagree) to 5 (fully agree), participants agreed that the AAR reached the following objectives of the workshop.

- 70% of participants fully agreed that the AAR allowed participant to identify challenges and gaps encountered during the course of the response
- 72% of participants fully agreed that the AAR allowed participants to share experiences and best practices encountered during the course of the response
- 49% of participants agreed that the AAR contributed to strengthen interdisciplinary collaboration and coordination between health stakeholders involved in the response
- 22% of participants fully agreed that the AAR contributed to strengthen interdisciplinary collaboration and coordination between sectors (health, agriculture, environment) involved in the response
- 64% of participants fully agreed that the AAR allowed participants to propose actions for improving preparedness, early detection and response to public health emergencies.

Other results for this section are presented in the chart below:



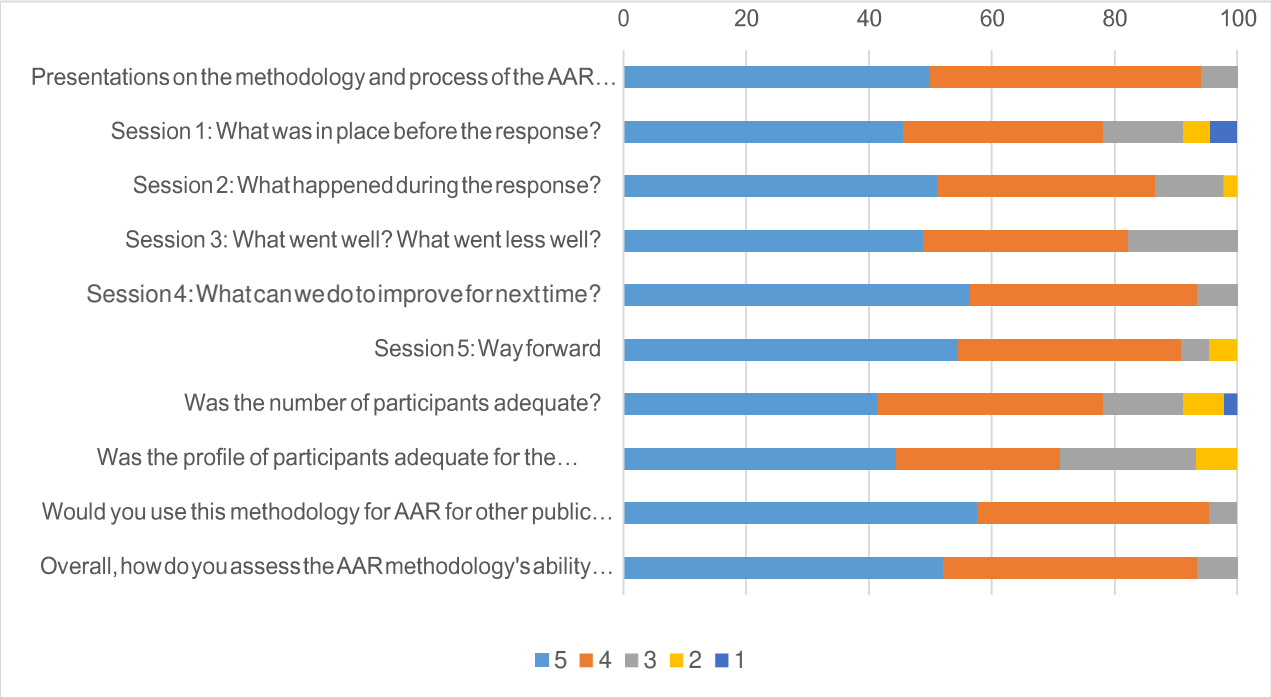
On a scale of 1 (fully disagree) to 5 (fully agree), how well did the AAR achieve its objectives?

- 50% of participants fully agreed that the presentations on the methodology and process of the AAR workshop were clear and useful
- 46% of participants fully agreed that objectives of **session 1** – ''What was in place before the response '' were achieved
- 51% of participants fully agreed that the objectives of **session 2** – "what happened during

the response" were achieved

- 49% of participants fully agreed that the objectives of **session 3** – "What went well? What went less well? Why?" were achieved
- 57% of participants fully agreed that the objectives of **session 4** – "What can we do to improve for next time" were achieved
- 55% of participants fully agreed that the objectives of **session 5** – "Way forward" were achieved
- 44% of participants fully agreed that the profile of participants was adequate for the function of the response examined
- 58% of participants fully agreed that they would use this methodology for AAR for other public health emergencies in Uganda.

Other results for this section are presented in the chart below:

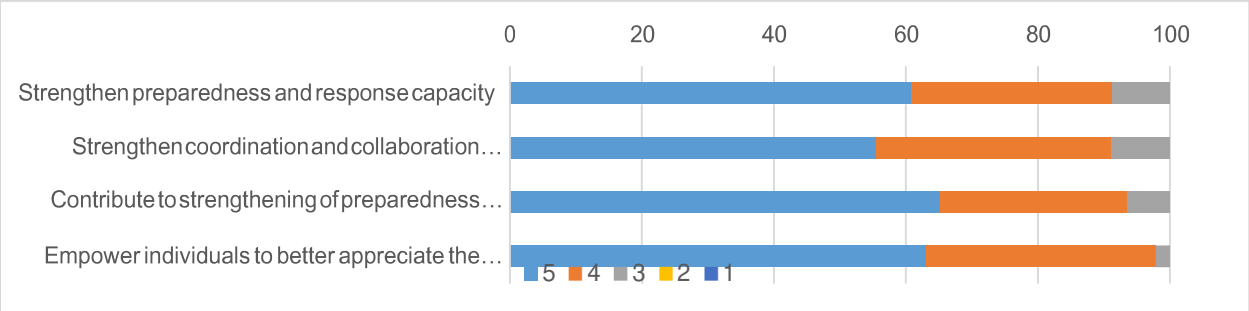


To what extent do you think the results of the AAR can contribute to….:

- 61% of participants fully agreed that the results of the AAR can contribute to strengthen preparedness and response capacity
- 56% of participants fully agreed that the results of the AAR can contribute to strengthen coordination and collaboration mechanisms

- 65% of participants fully agreed that the results of the AAR can contribute to strengthening of preparedness and response plans
- 63% of participants fully agreed that the results of the AAR can contribute to empower individuals to better appreciate the challenges of emergency response.

Other results for this section are presented in the chart below:



Annex 3 Milestones

Months	Date	Milestone	Colour
January	11th- 2018	RRT constituted at DASH	Green
	16th - 2018	RRT constituted at ATBUTH	Green
	21st- 2018	Activation of EOC in FETHA,Ebonyi	Green
	16th- 2018	Support from ALIMA on FMC Owo	Green
	17th - 2018	Provision of state supplies from state govt to SSH, Jalingo	Green
	20th - 2018	Death of HCW from LF, KSSH, kogi	Green
	26th - 2018	Deployment of NCDC RRT to ISTH, EDO	Green
	25th - 2018	Increase in man power for LF case management (Doctors and lab scientist) FETHA Ebonyi	Green
	1/2/2018	First Confirmed case	Purple
	1/4/2018	First Confirmed case	Purple
	1/11/2018	First suspected case reported	Purple
	Jan-18	Active case search of Lassa Fever in 30 LGA	Purple
	Jan-18	Contact tracing began	Purple
	1/20/2018	Activation of RRT	Purple
	1/21/2018	First Confirmed case	Purple
	1/26/2018	State daily feedback calls	Purple
	1/26/2018	Lassa Fever outbreak declared	Purple
	1/25/2018	Daily data harmonization	Purple
	Jan-18	Reactivated RRT and first case was recorded	Yellow
	Jan-18	Preposition drugs and supplies to secondary health facilities	Yellow
	8th January,18	Reactivated EOC	Yellow
	25th Jan,18	Arrival of NCDC team	Yellow
	Jan-18	Consumables provided	Orange
	Jan-18	LUTH receives PCR reagents from NCDC	Orange
	27th January, 2018	Updating List of stakeholders, social mobilization committee and representative of media houses	Pink
	29th January, 2018	Airing of Jingles on Radio and TV station	Pink
	January, 2018	Massive community Sensitization and engagement	Pink
	January – May, 2018	Collaboration between health educator and Balm of Gilead foundation to carry out sensitization rallies in all schools and Markets	Pink
	January, 2018	Involvement of state health educator in emergency preparedness and response team meeting	Pink
	January, 2018	Radio and TV phone in programme	Pink
Feburary	7th Febraury 2018	Provision of supplies from NCDC to FETHA, Ebonyi	Green
	2nd February	Supply of tent and other supplies for ISTH, Edo	Green
	2nd February	Received dialysis machine for ISTH,Edo	Green
	9th February 2018	Funds released from state government for lassa fever case mgt. at FMC Jalingo	Green

	13th February 2018	Declaration of LF outbreak as grade 2	Green
	17th February 2018	Successfully managed two cases KSSH,Kogi	Green
	26th February 2018	Extension of isolation centre at ISTH,Edo	Green
	28th February 2018	Activation of Isolation centre at FMC Owo	Green
	4/1/2018	Last positive case recorded	Purple
	Epid Week 6	Migration of Line list to SORMAS	Purple
	2/12/2018	Last confirmed case of Lassa Fever	Purple
	2/16/2018	Daily surveillance meeting	Purple
	2/17/2018	Coordinating Response activities	Purple
	22nd Feb,18	NCDC/WHO Advocacy	Yellow
	23RD Feb,18	Reactivation of EOC	Yellow
	Feb-18	Availability of funds in Taraba and Kogi State	Yellow
	Feb-18	DONATION of PCR machines	Orange
	Feb-18	FETHA starts LF testing	Orange
	19-Feb-18	WHO provides Lab surge capacity	Orange
	6-Feb-18	Standardized template for Lab data testing	Orange
	8-Feb-18	training LF Lab personnel	Orange
	Feb-18	PCR machine breaks down@ FETHA	Orange
	February, 2018	Active involvement of state health educator in EOC	Pink
	February, 2018	Sensitization of 14 traditional leaders and communities	Pink
	February, 2018	Active market Sensitization	Pink
March	3rd March 2018	IPC Training for HCWs ISTH,Edo	Green
	5th March 2018	Employment of Case mgt. Physicians ,FMC Owo	Green
	11th March 2018	Deployment of NCDC RRT and supplied ATBUTH Bauchi	Green
	20th March 2018	Case detection and IPC training for HCWs in PHCs in Ondo by MSF Spain	Green
	21st March 2018	Teleconference meeting with case mgt. Physicians NCDC(CM/IPC/SB)	Green
	22nd March 2018	Deployment of NCDC RRT for CM/IPC/SB in JUTH, Plateau	Green
	28th March 2018	1st HCW successfully managed KSSH, Kogi	Green
	31st March 2018	Construction of isolation centre Nasarawa(DASH)	Green

	12th-15th March 2018	Activation of real time reporting of LF cases to SORMAS	Purple
	16th-17th March 2018	Deployment of SORMAS	Purple
	2nd week of March	Training of clinicians on data management	Purple
	3/20/2018	Detection of first LF confirmed case	Purple
	March, 18	Activation of EPR	Yellow
	14th March, 18	Capacity building, IPC	Yellow
	14th March,18	Construction of State owned isolation centre	Yellow
	8TH,March,18	Capacity building	Yellow
	8TH,March,19	Release of funds	Yellow
	12-Mar-18	Supportive supervision of to LF testing Labs	Yellow
	1-Mar-18	Mapping of LF testing Labs	Orange
	Mar-18	Start harmonization of Lab data	Orange
	12-Mar-18	Supportive supervision of LF testing Labs	Orange
	26-Mar-18	Donation of equipment to FETHA Lab	Orange
	26 March 2018	Development of National LF Testing algorithm	Orange
	26-Mar-18	Formation of National LF testing network (Lab)	Orange
	27-Mar-18	WHO donates altona PCR kits	Orange
	6th March, 2018	Panel Discussion on television by state health educator in collaboration with Red Cross society	Pink
	8th March, 2018	Community sensitization and social mobilization	Pink
	8th – 10th March, 2018	Community dialogue and administration of KAP questionnaires in 4 LGAs	Pink
	March, 2018	Town announcer trained in Key messages in 4 LGAs	Pink
	March, 2018	Publication of Lassa Fever advisories in three (3) national dailies	Pink
	March, 2018	Fund release by the state government for awareness and sensitization activities	Pink
	March, 2018	Lassa Fever community dialogue in three (3) most affected state	Pink
	21st March, 2018	Advocacy visit to community leaders	Pink
	22nd March, 2018	Sensitization of health workers	Pink
April	4/1/2018	Last positive case recorded	Purple
	4/4/2018	Declared Epidemic over	Purple
	4/8/2018	National RRT arrival in Abuja	Purple
	4/12/2018	Lassa fever outbreak over	Purple
	4/19/2018	SORMAS in Ebonyi	Purple
	4/19/2018	Detailed investigation for affected HCW	Purple
	4/30/2018	Development of national Emergency Threshold	Purple

	9TH April,18	Official declaration of outbreak by HCH	Yellow
	13th April.18	Capacity building and advocacy	Yellow
	12-Apr-18	PCR at LUTH repaired	Yellow
	17-Apr-18	risk assessment / Biosafety workshop	Yellow
	Apr-18	IRUA Lab fenced	Yellow
	12-Apr-18	PCR at LUTH repaired	Orange
	17-Apr-18	risk assessment / Biosafety workshop	Orange
	Apr-18	IRUA Lab fenced	Orange
May	12TH MAY 2018	1st Dialysis on LF patient in FMC Owo by ALIMA	Green
	5/10/2018	Declaration of end of emergency phase of LF	Purple
	2-May-18	Transport begins National	Yellow
	May, 2018	Involvement of ward focal persons in dissemination of Lassa Fever and sensitization activities	Pink
	May, 2018	Organization of community dialogue in 8 communities	Pink
	2-May-18	Transport begins National	Orange

Annex 4 Picture Gallery


2018
LASSA FEVER OUTBREAK
AFTER ACTION REVIEW AND
PREPAREDNESS MEETING
JUNE 5TH - 7TH JUNE, 2018
Barcelona Hotels


Barcelona Hotels


2018
SURVEILLANCE


PLANS, POLICIES & PROCEDURES
RESOURCES
OTHERS
COORDINATION MECHANISMS
PREPAREDNESS ACTIVITIES