



Nigeria Centre for Disease Control

Protecting the health of Nigerians

Overview of Lassa fever epidemiology and current surveillance systems in Nigeria

25th October, 2022

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***“Between animal and human medicine
there are no dividing lines—nor should there be”***

- Rudolf Virchow, 1856



<https://www.britannica.com/biography/Rudolf-Virchow>

53 years of Lassa fever(LF).....



- Discovered in Lassa Village, Borno State, Nigeria in 1969
- Acute viral haemorrhagic fever (VHF) caused by the Lassa virus (LASV I-III)
- Endemic in West African countries: Nigeria, Liberia, Sierra Leone, Guinea
 - *Annual outbreaks in these regions*
 - *Predictable trend - high morbidity & mortality*
 - *All year transmission - high transmission seasonal clustering*
- Reservoir: Multimammate rat “*Mastomys natalensis*”
- Mode of transmission: **Rodent-to-human** and Human-to-human (HCWs)
- Affects all age groups and both sexes



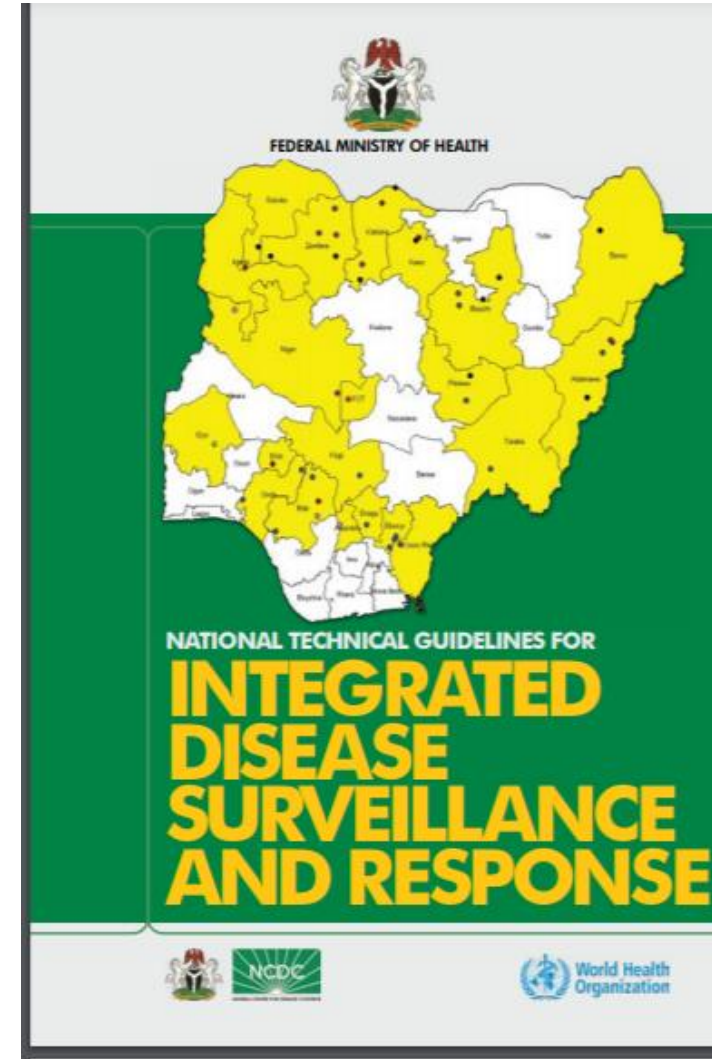
LF response coordination national TWG



LF surveillance & Notification system

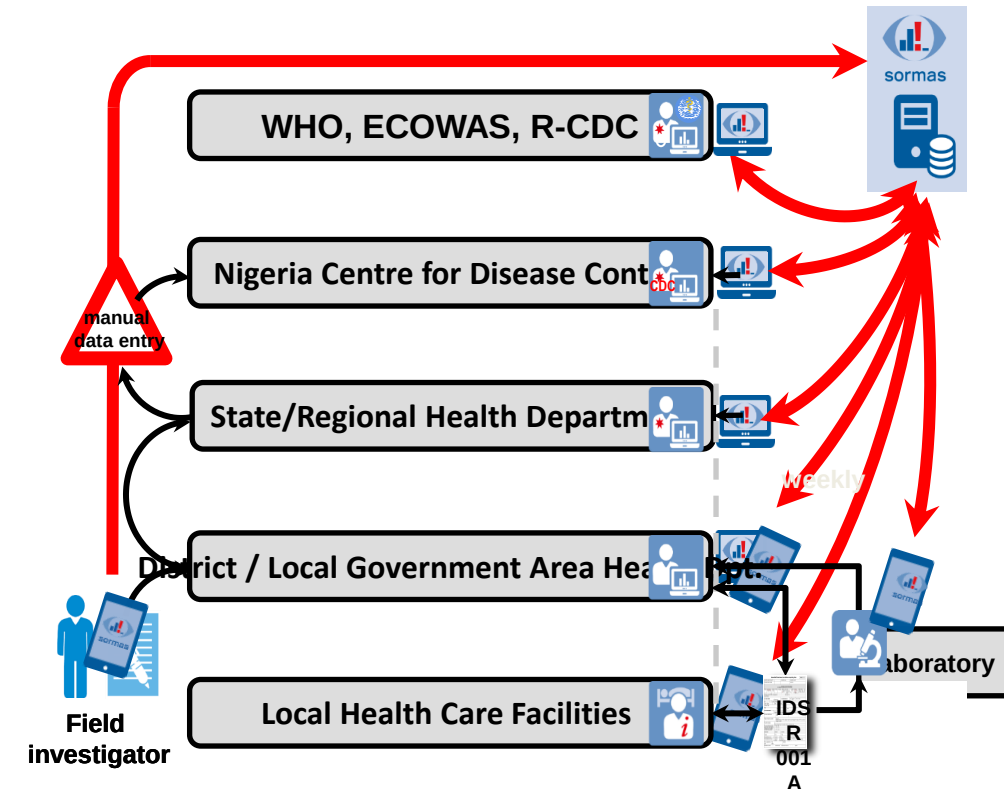


- Lassa fever is one of the epidemic prone diseases that requires **immediate notification** for timely action to be taken to prevent rapid transmission
- Notification of LF occurrence follows the **IDSR reporting flow**
- Notification of LF is case-based using **Case Investigation Form** (CIF) available in paper and electronic formats through SORMAS
- The response to a LF case requires an efficient and coordinated communication at all levels (Community, LGA, States and National)
- Samples are collected from **all** suspected LF cases and tested

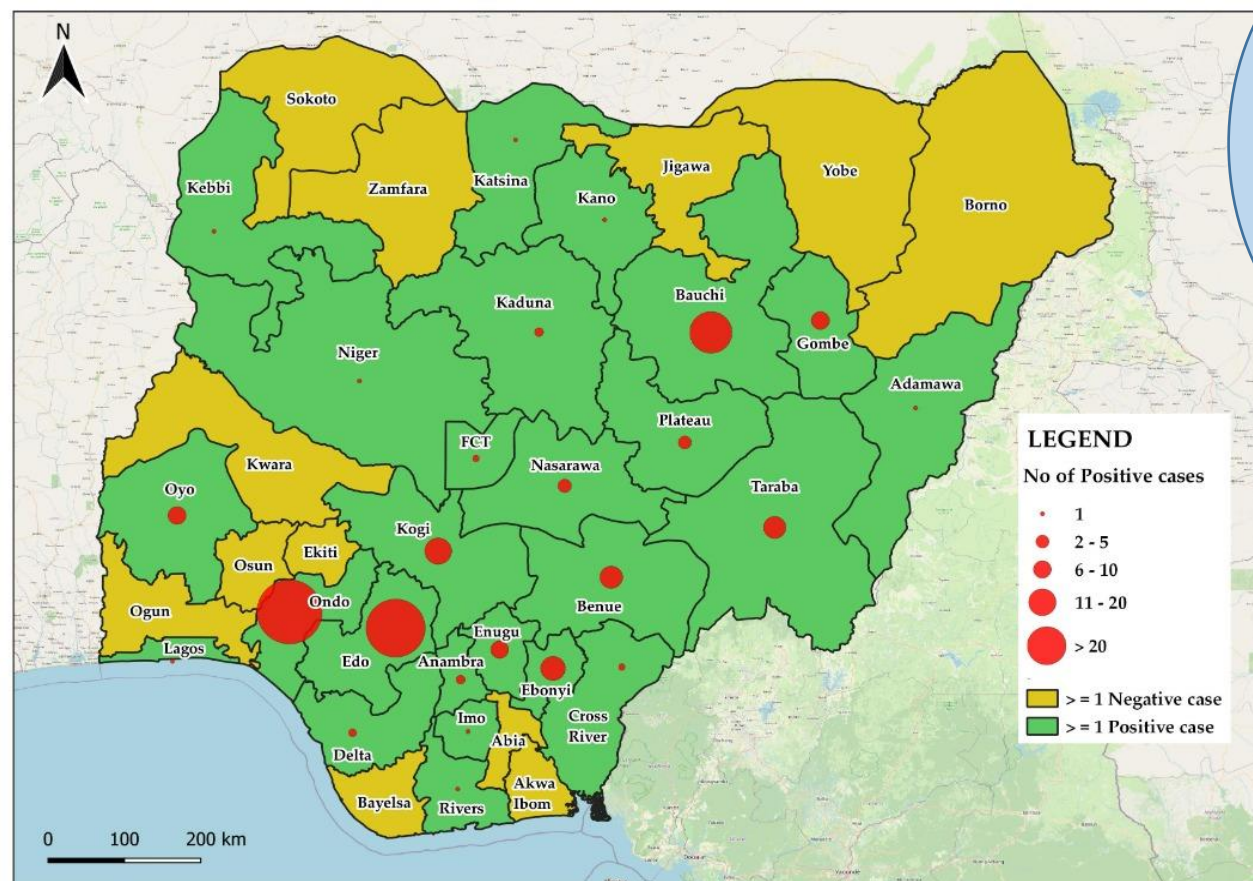
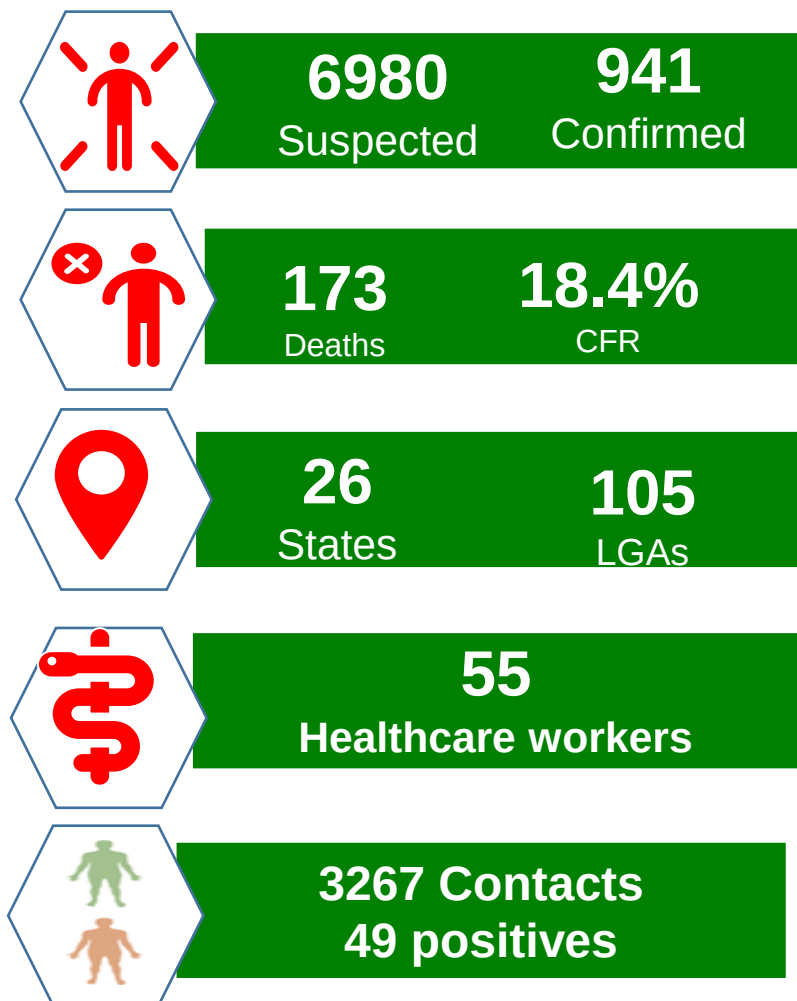


Improved Surveillance system

- Paper based to excel to **digital based tool** – SORMAS
 - *Improved Data quality and timeliness* – **real-time data**
- Event based surveillance
 - *Connect Centre*
- Enhanced surveillance
 - *Contact tracing*
 - *Active case finding*
- Development and review of data tools
 - *Case investigation form & Contact follow up form*
 - *Case management form & Mortality review form*
 - *Healthcare worker infection form*

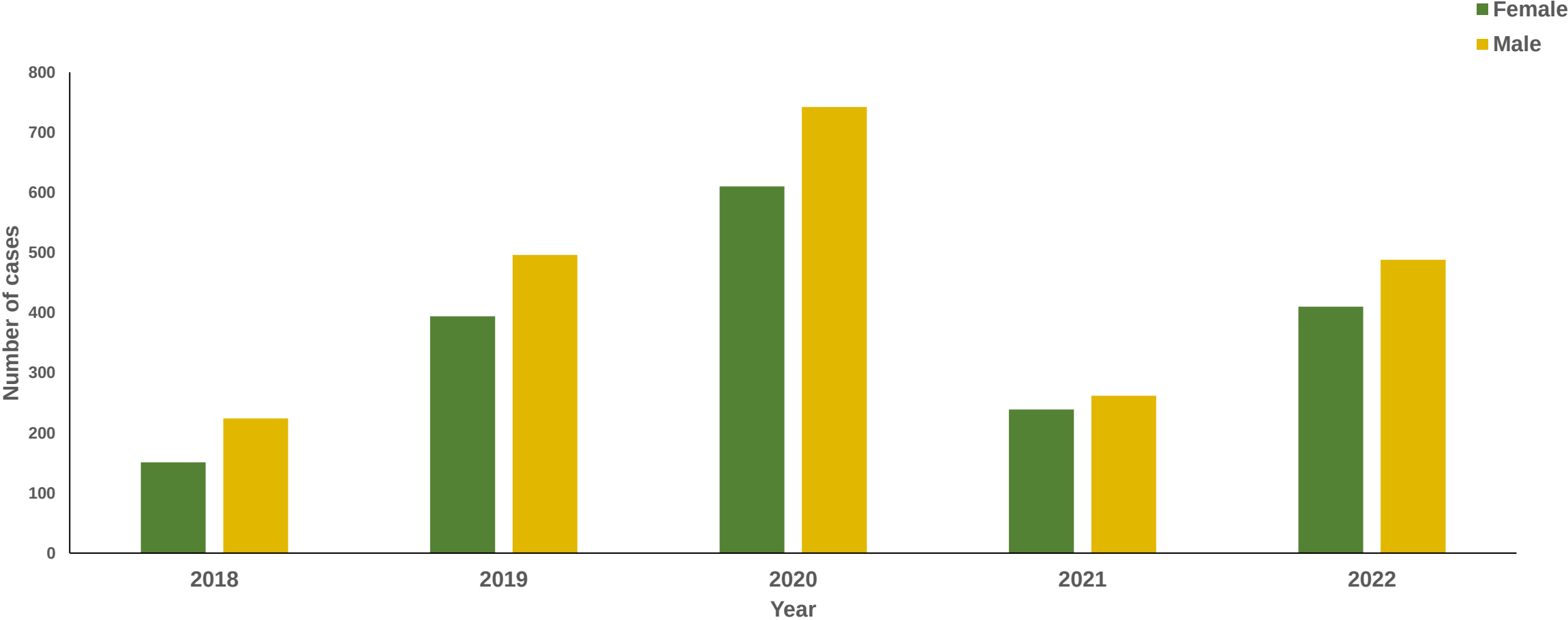


Current LF outbreak as at week 41, 2022

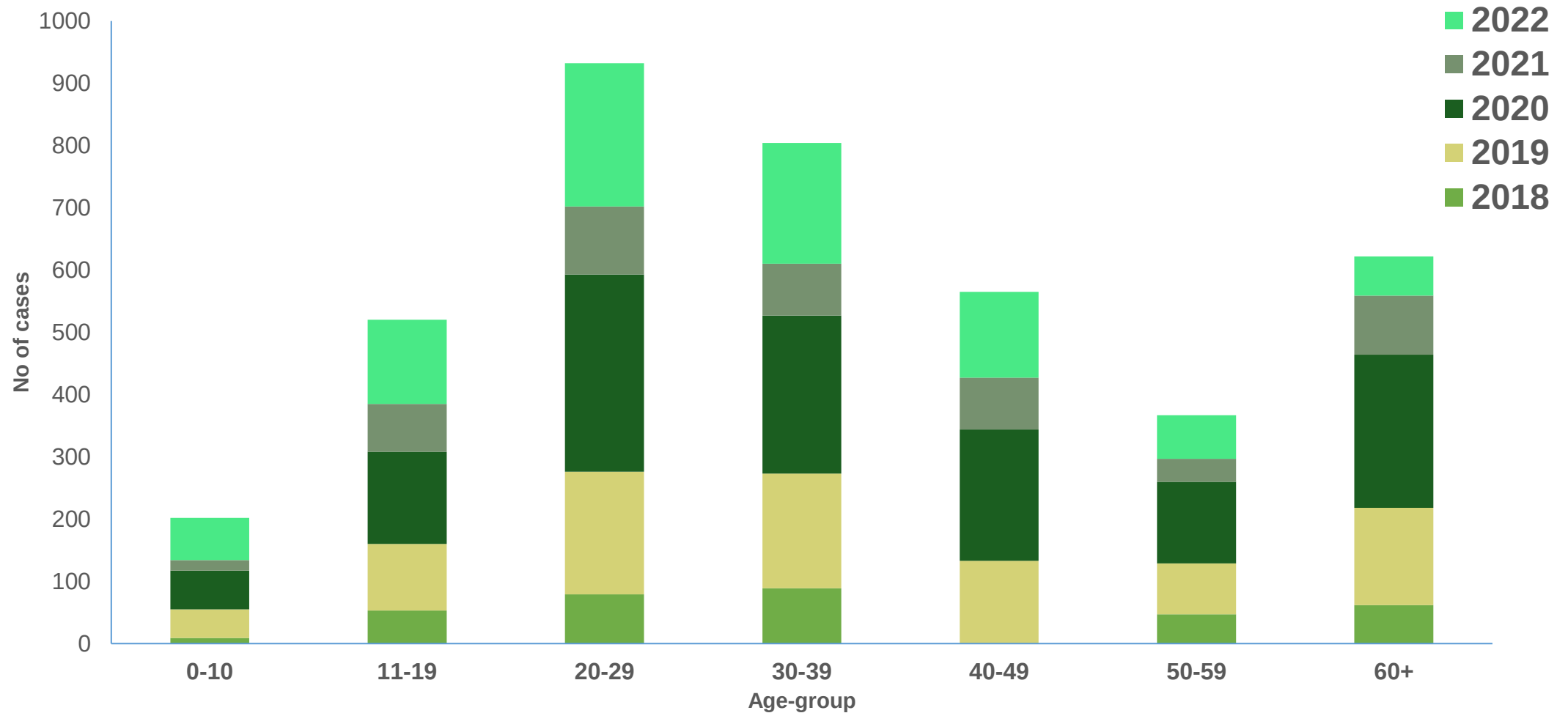


>70%
cases
from
Ondo,
Edo and
Bauchi

Sex distribution of LF cases in Nigeria, 2018 - 2022



Age distribution of Lassa fever confirmed cases in Nigeria, 2018 - 2022

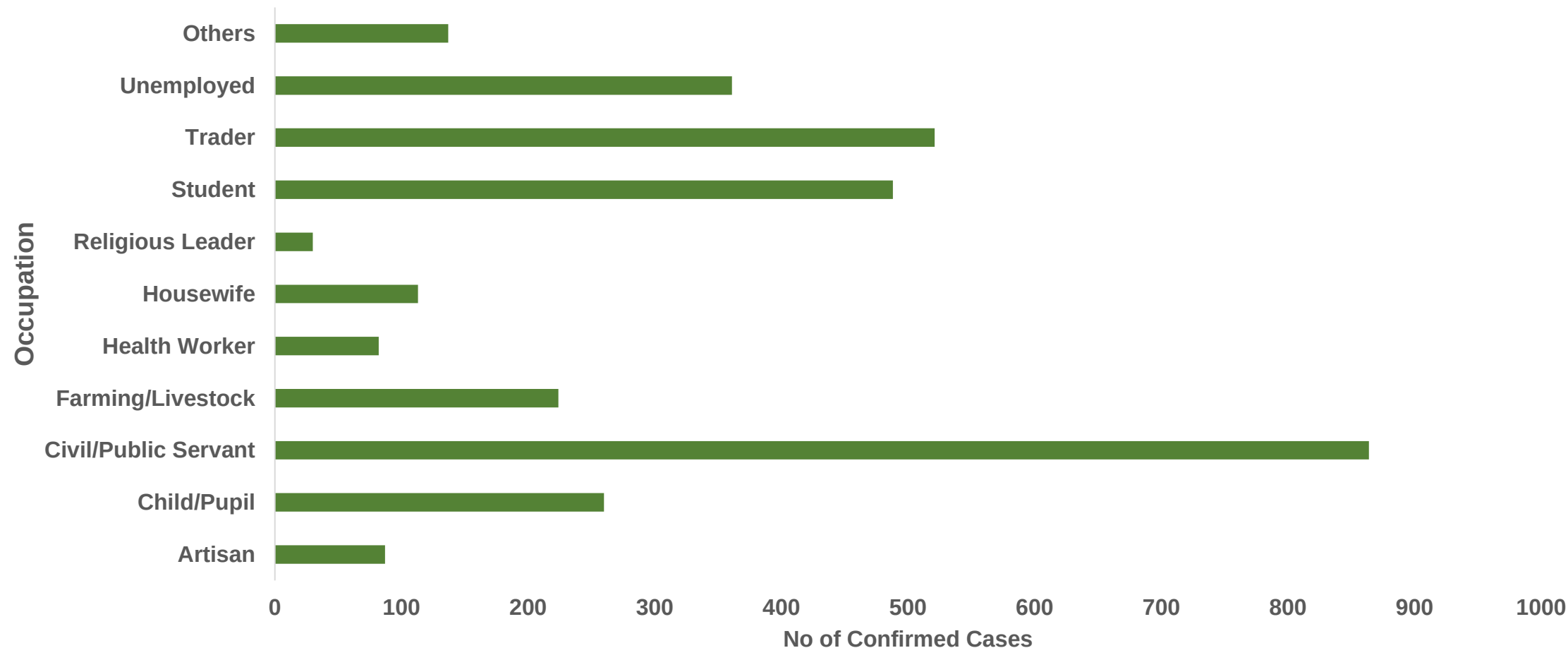


Distribution LF Contacts in Nigeria, 2018 - 2022

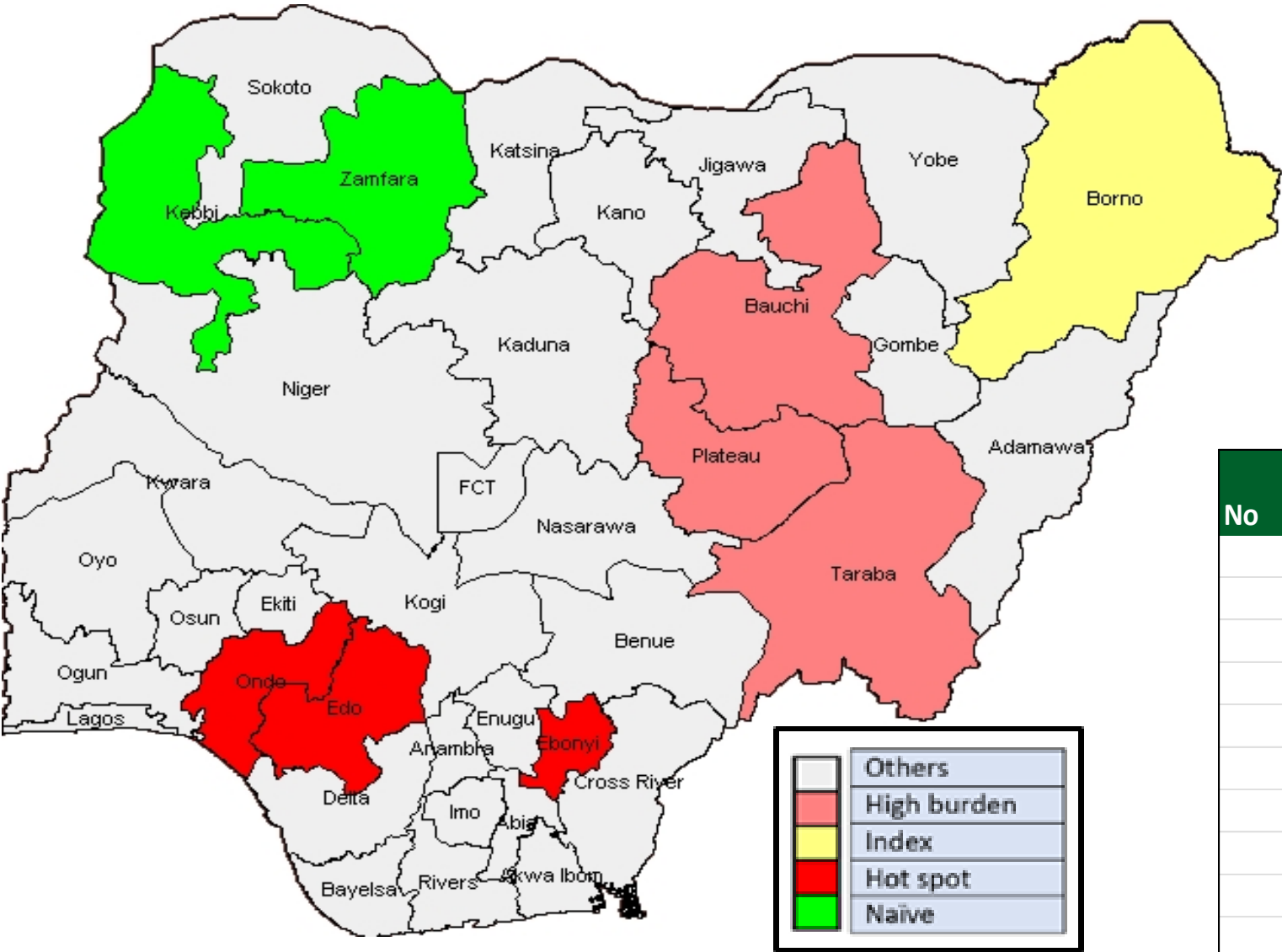


Year	Total Contacts	Symptomatic	Positive	Contact PI
2018	9643	118	38	32.2
2019	9379	144	68	47.2
2020	10118	172	57	33.1
2021	3466	40	19	48.5
2022	3267	101	49	48.5

Occupation distribution of Lassa fever confirmed cases in Nigeria, 2018 - 2021



Categorization of states reporting LF



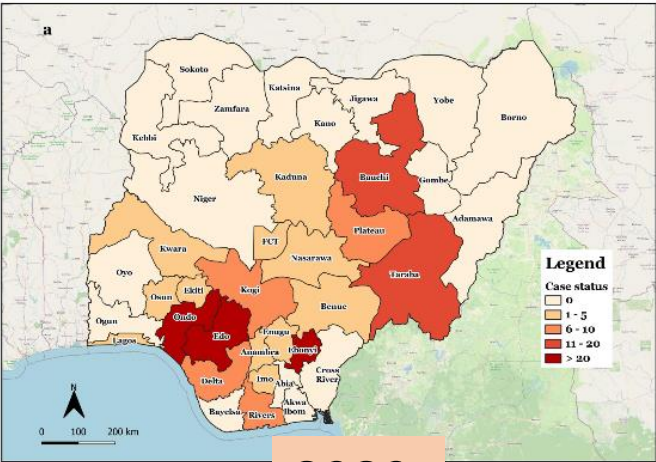
	State	confirmed	Percent	Cum. %
1	Ondo	307	33%	33%
2	Edo	240	26%	58%
3	Bauchi	122	13%	71%
4	Kogi	48	5%	76%
5	Ebonyi	41	4%	81%

Top 10 LGAs					
No	LGA	State	Cases	%	Cum. %
1	Owo	Ondo	214	23%	23%
2	Etsako West	Edo	73	8%	30%
3	Esan West	Edo	65	7%	37%
4	Esan North-East	Edo	46	5%	42%
5	Bauchi	Bauchi	46	5%	47%
6	Akure South	Ondo	38	4%	51%
7	Tafawa-Balewa	Bauchi	38	4%	55%
8	Makurdi	Benue	31	3%	59%
9	Toro	Bauchi	25	3%	61%
10	Ose	Ondo	22	2%	64%

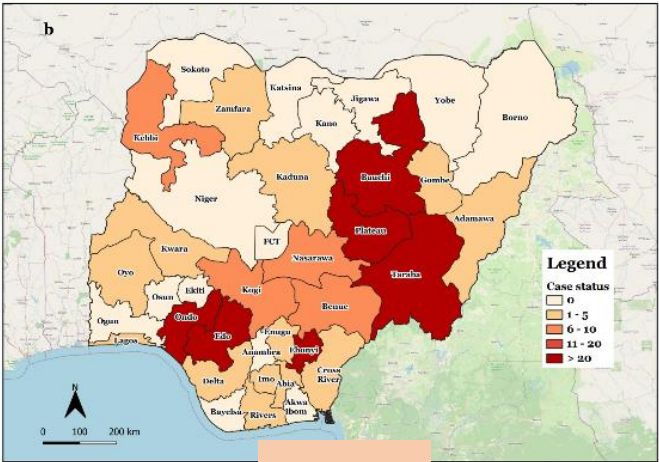
Distribution of LF cases by State 2018 to 2022



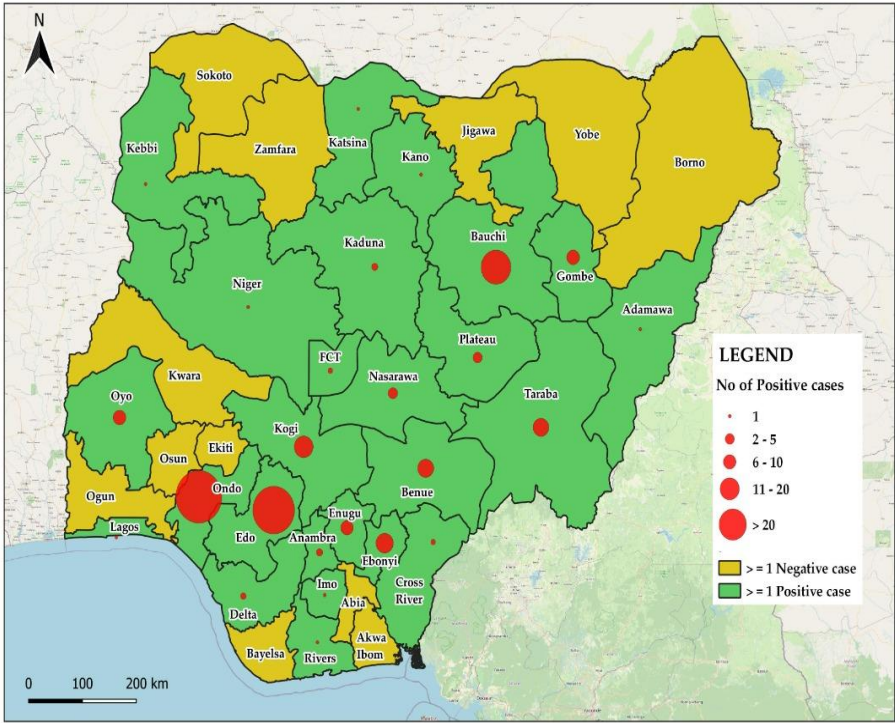
2018



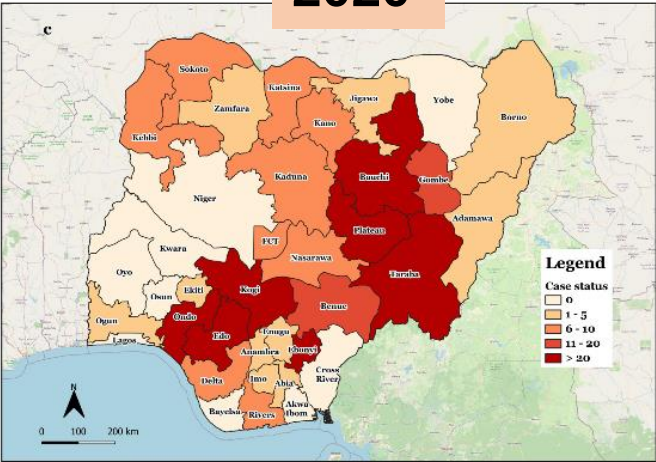
2019



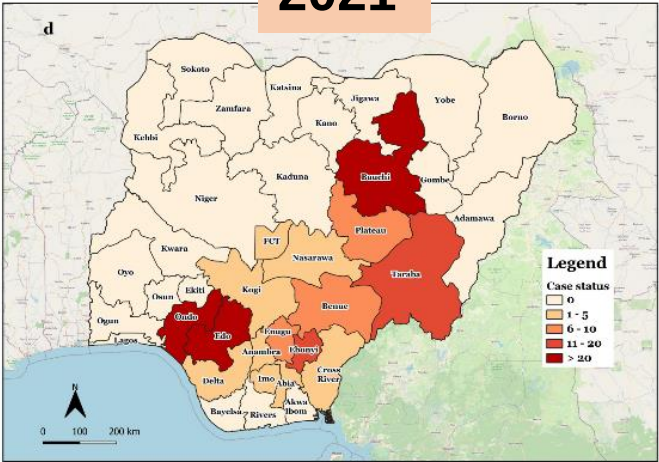
2022



2020

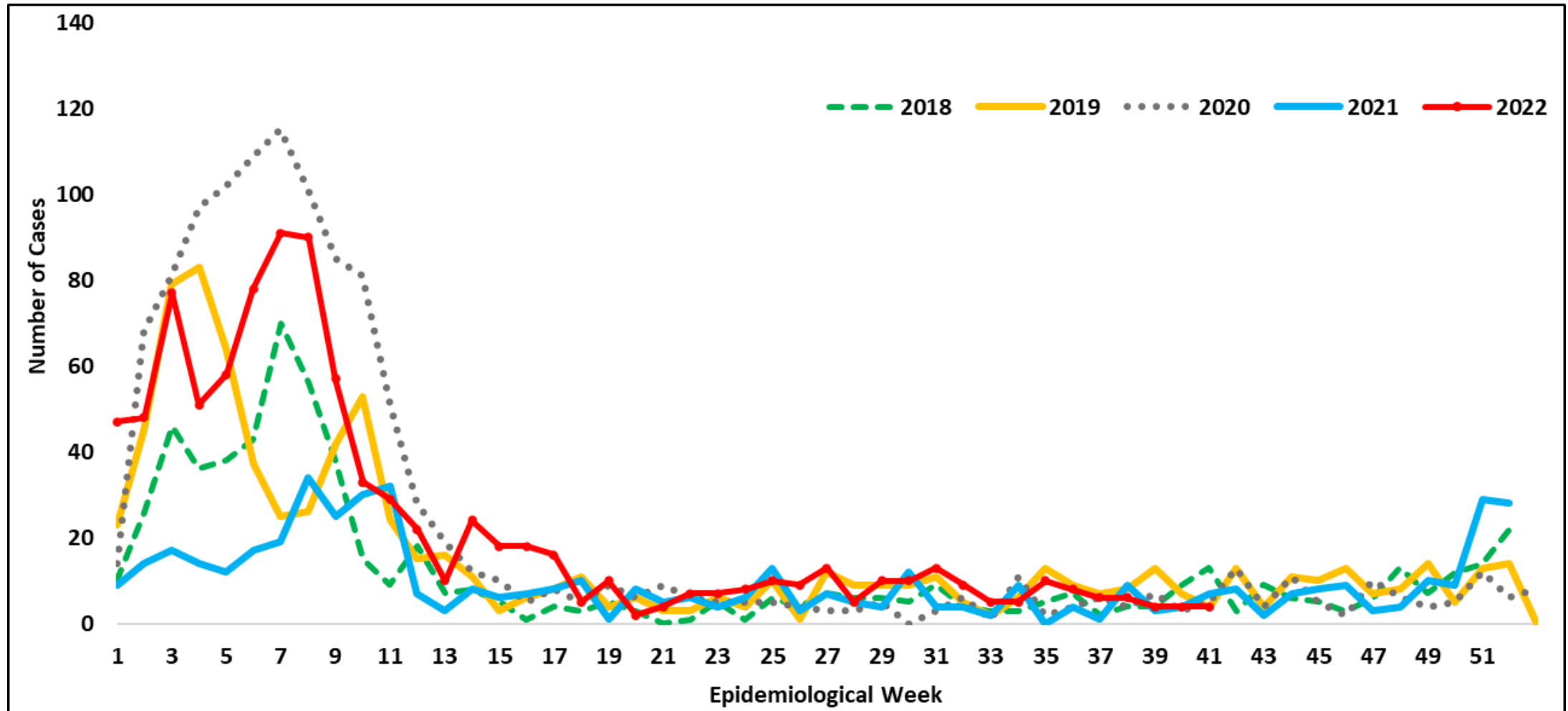


2021



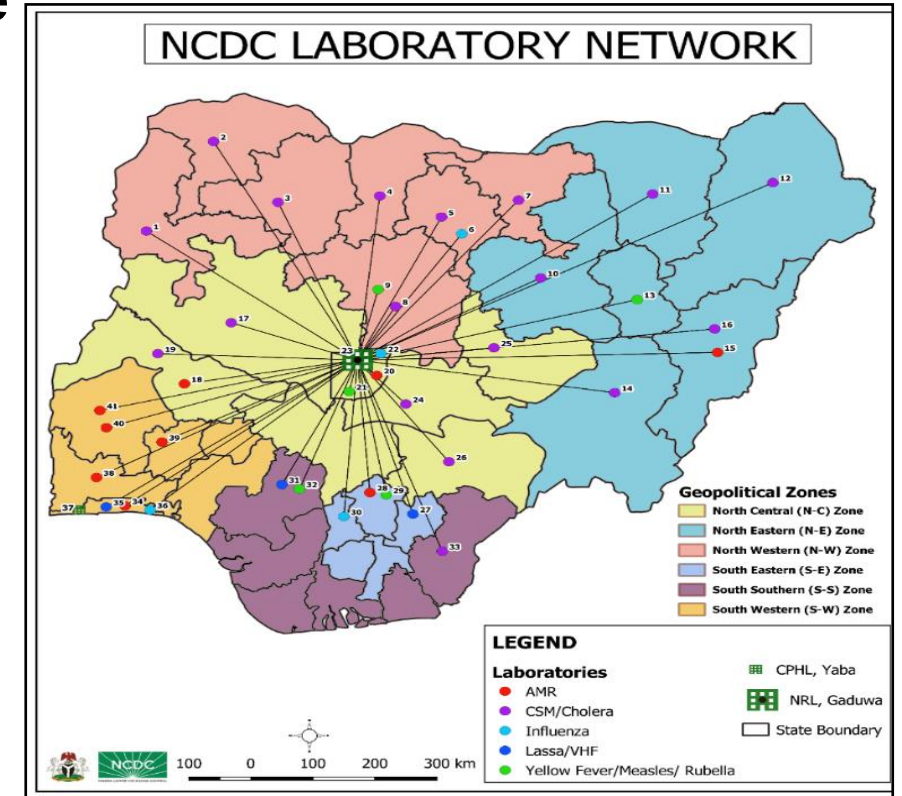
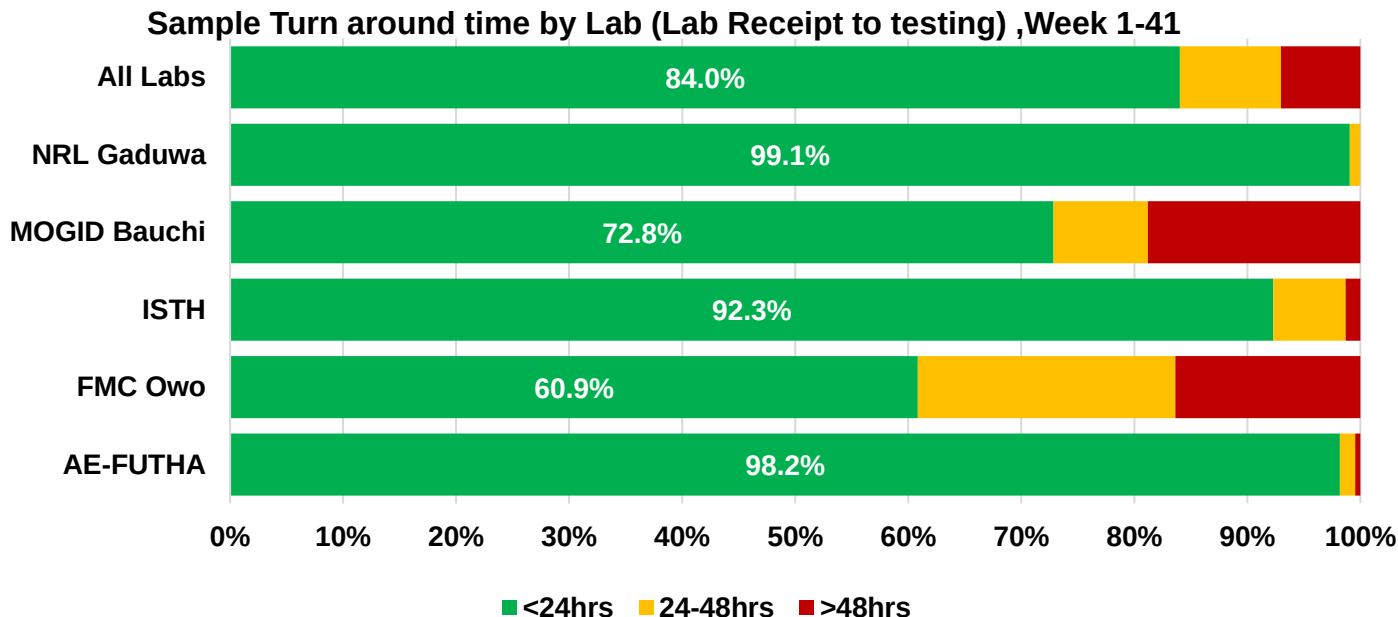
NCDC
NIGERIA CENTRE FOR DISEASE CONTROL

Weekly trends of LF confirmed cases in Nigeria, 2018 - 2022



Improved LF diagnosis

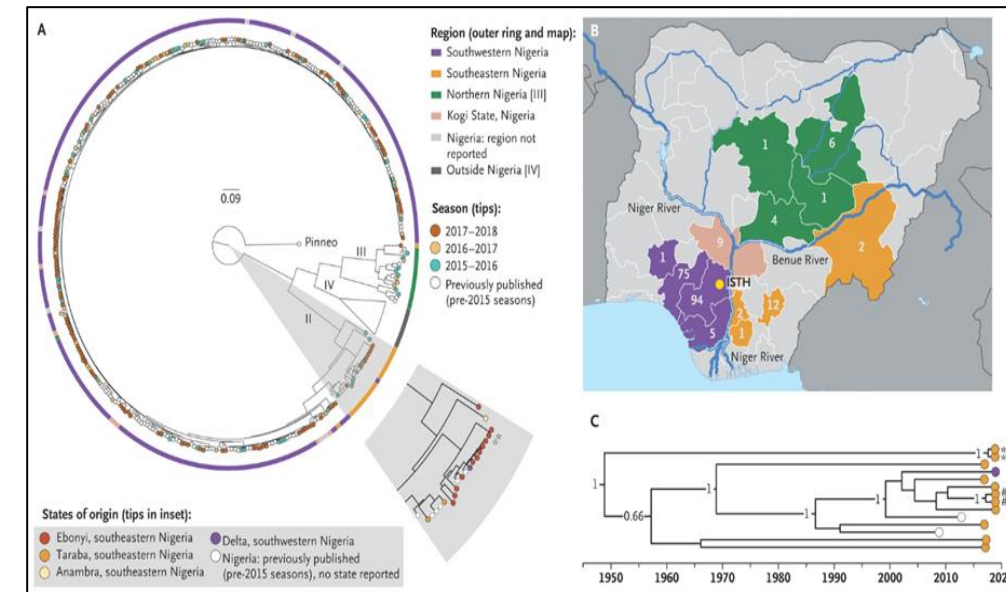
- Increased LF RT PCR laboratories from two to **Nine**
- Sample **referral laboratory network**
- Free** transport logistics framework
 - Improved turnaround time



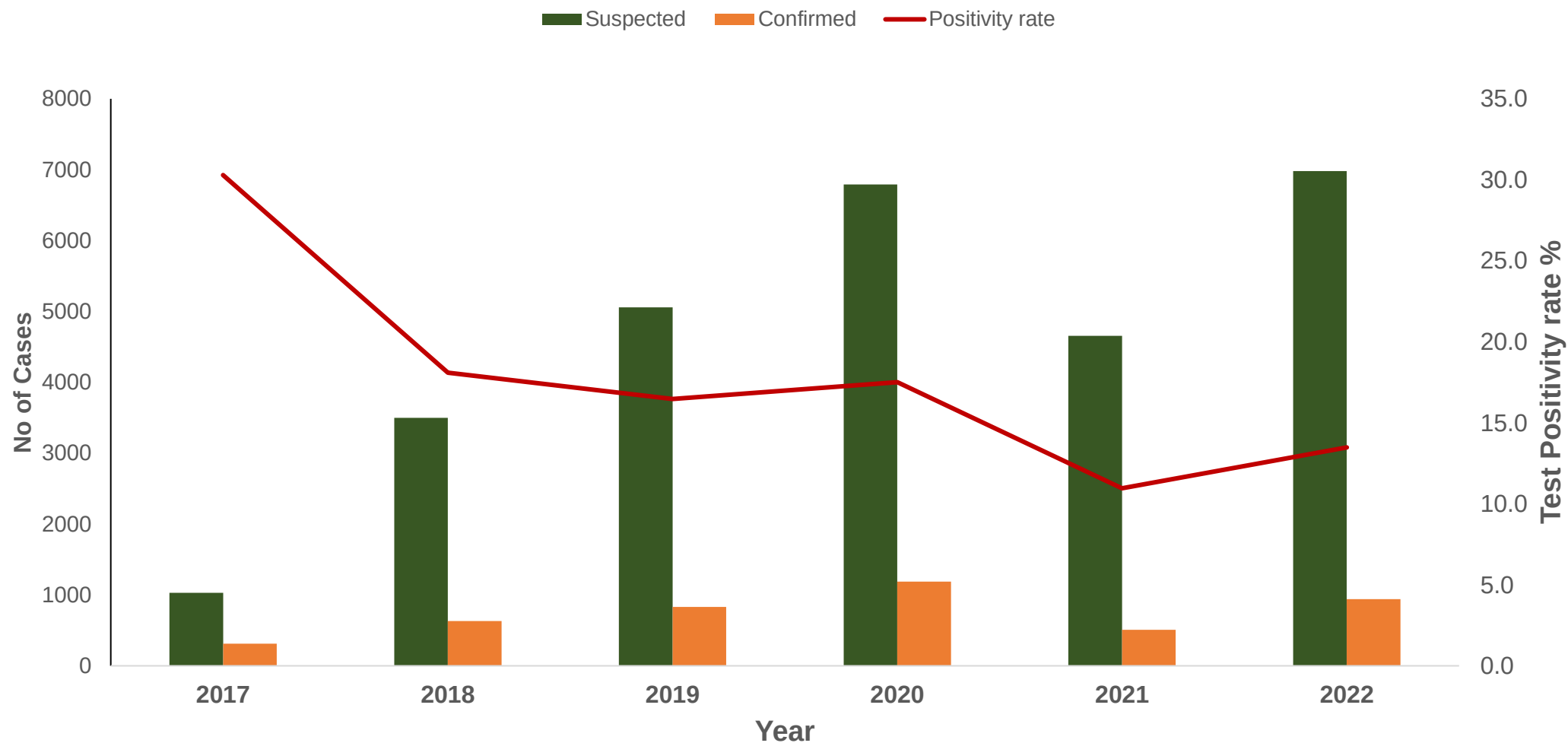
Lessons from genetic sequencing



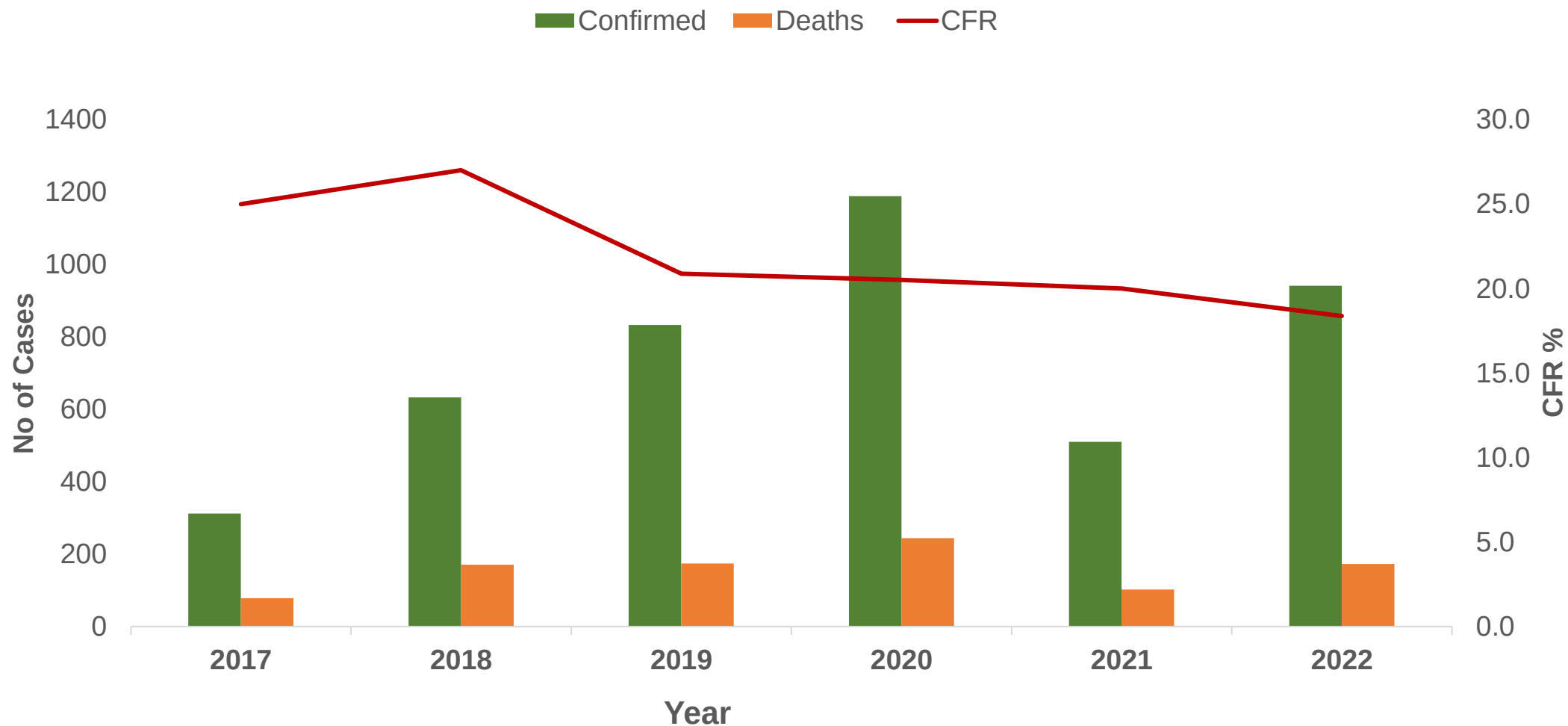
- Improved understanding of circulating pathogens
 - **No new virus lineages detected**; previously *circulating lineages I, II & III*
 - *genetic diversity, spatiotemporal distribution, monitoring transmission over time*
- Provided insights to source of infection
 - Demonstration of **spill over of viruses from rodent reservoir to humans**
- Guided outbreak response plans and strategies
 - *risk communications, contact tracing, improved diagnostics*



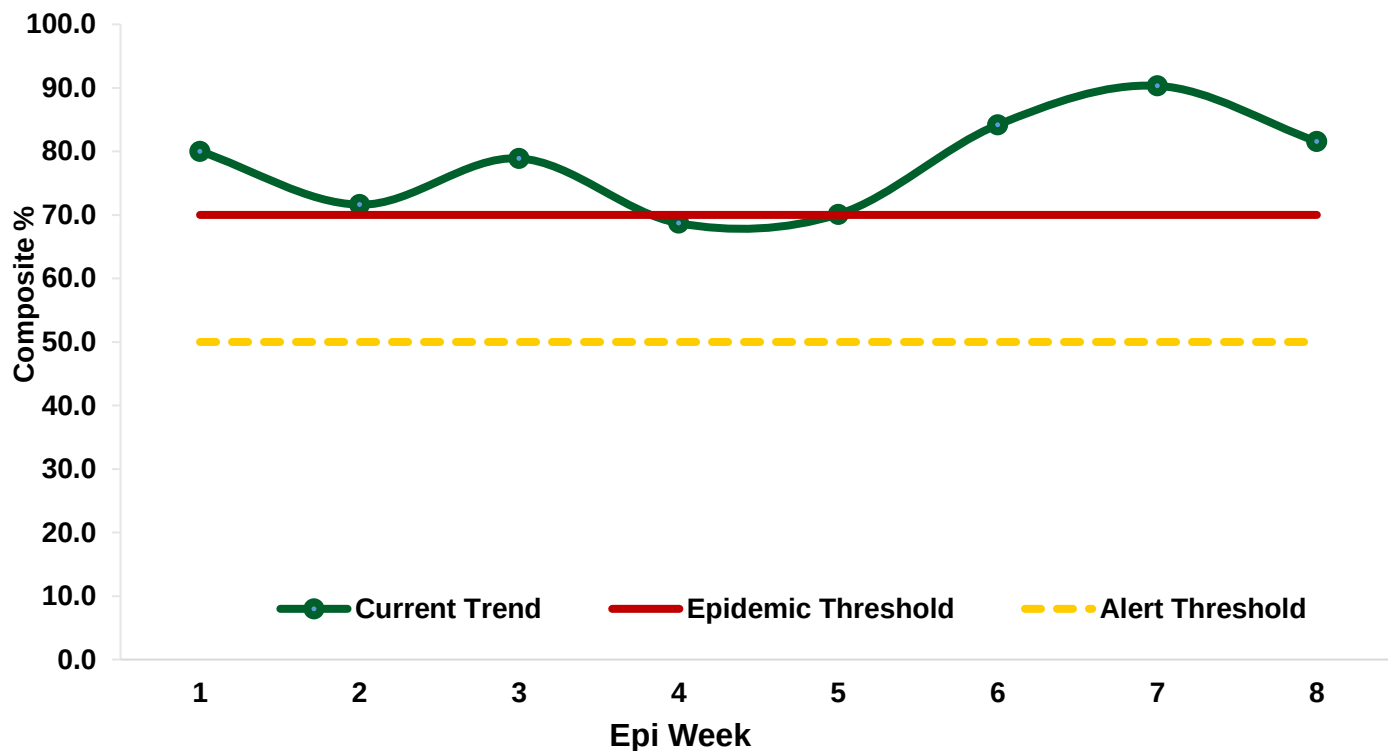
Suspected, confirmed and TPR: 2017-2022



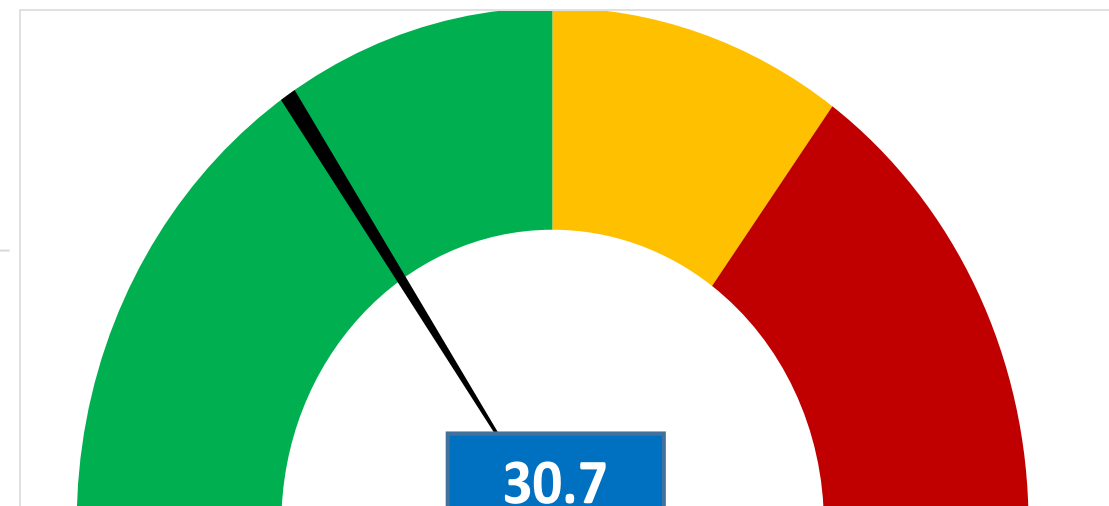
Confirmed, Deaths and CFR: 2017-2022



Emergency declaration using Composite indicator



	Parameter	Weight (%)	Threshold	Week 41	Week 41 %
1	Case Threshold	50	11	4	18.1818
2	Bed Capacity	9	2	0	0
3	CFR	12	25%	0.0%	0.0
4	HCW Infections	7	2	0	0
5	Sample TAT	6	22%	16.5%	4.49859
6	Unsafe Burials	1	2	0	0
7	Suspicion Index	15	130	97	8.0
	Total	100			30.7



Publication -

Improved information sharing

- Weekly dissemination of Situation reports-
www.ncdc.gov.ng/diseases/sitreps
- Publications:
 - Descriptive
 - Nosocomial
 - Sequencing



Lassa Fever Situation Report



NCDC
NIGERIA CENTRE FOR DISEASE CONTROL

www.ncdc.gov.ng

Epi Week: 3 2022

Nigeria Centre for Disease Control
Protecting the health of Nigerians

PLOT 801 EBITU UKIWE STREET, JABI ABUJA, NIGERIA.
TOLL FREE CALL: 6232. Email: info@ncdc.gov.ng @NCDCgov

Lassa fever Situation Report

Epi Week 3: 17 – 23 January, 2022

Key Points

Table 1: Summary of current week (3), cumulative from Epi week 1–3, 2022 and comparison with previous year (2022)

Reporting Period	Suspected cases	Confirmed cases	Probable cases	Deaths (Confirmed cases)	Case Fatality Ratio (CFR)	States and LGAs affected (Confirmed cases)
Current week (week 3)	294	74	0	11	14.9%	State(s): 9 LGA(s): 23
2022 Cumulative	759	170	0	32	18.8%	State(s): 12 LGA(s): 37

Conclusion



Instituting targeted evidence based Onehealth intervention in collaboration with all **partners** and **stakeholders** is critical towards reduction of the annual LF incidence and mortality.

Acknowledgement

Stronger together!!!

National Lassa Fever TWG



Yes we can reduce CFR to <one digit !!!



Thank you!
Merci!
Obrigado!

25/10/2022

We Keep Pushing!

