Lassa fever epidemiology in Nigeria
Implications for research

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Population size ~ 186 million

History of disease outbreaks- **Lassa fever**, Ebola, yellow fever, Meningitis, Monkeypox

Annual population growth rate of 2.6%

Low total expenditure on health as a percentage of GDP
Mandate

Prevent, detect, and control diseases of public health importance.

Coordinate surveillance systems to collect, analyse and interpret data on diseases of public health importance to guide action.

Support States in responding to small outbreaks, and lead the response to large disease outbreaks.

Develop and maintain a network of reference and specialised laboratories.

Conduct, collate, synthesise and disseminate public health research to inform policy.

Coordinate the compliance with international health regulations.
Lassa fever epidemiological situation (1\textsuperscript{st} January-22\textsuperscript{nd} April 2018)

1865 Total suspected Lassa fever cases
416 Confirmed cases
9 Probable cases
105 Deaths in confirmed cases
37 Health workers infected

- Decreasing trend
- 1 new case last week
Lassa fever confirmed cases: 2016 - 2018

Number of confirmed or probable cases

Week notified to NCDC

Weeks:
- W01 to W52

Year:
- 2016
- 2017
- 2018

Legend:
- 2016
- 2017
- 2018

Note: The graph shows the number of confirmed or probable Lassa fever cases reported to the Nigeria Centre for Disease Control (NCDC) from 2016 to 2018, by week.
Lassa fever confirmed cases: 2016 - 2018
2018 Lassa fever response activities

- Emergency Operations Centre (EOC) activated at NCDC to coordinate response
- Drugs, PPE, and other medical supplies deployed to States
- Rapid Response Teams deployed to States
- Intensive risk communication activities- public health advisory, press releases and media appearances
- 24 hours case management helpdesk established at NCDC
- High level advocacy visit to most affected States
- Guidelines, SOPs, IEC materials distributed to States
- Ongoing development of national protocol for Lassa fever diagnosis
- Ongoing review of national treatment protocol
Why are we finding more cases???
What are the epidemiological drivers???
Surveillance and detection architecture

- Increase from two laboratories to four in country
- Increased awareness among clinicians
- Enhanced surveillance - IDSR strengthened, SORMAS tool introduced
- National sample transportation protocol developed
Environmental factors
Are people more aware?
Five key lessons learnt so far

1. **Sequencing**: Initial results show no significant change in virus / increased virulence

2. **Epidemiology**: 80% of cases in 3 states, students, health workers affected

3. **Detection**: Increasing diagnostic capacity & confirmation rate

4. **Preparedness**: Increasing awareness & index of suspicion

5. **Response**: Strong collaboration- States, Federal Government, Partners
Priorities for research

- Laboratory diagnostic methods
- Treatment protocol
- Vaccine development
- Disease vector
- Route of transmission of the virus
- Community practices and behavior change
We are stronger together

Nigeria Centre for Disease Control

be a world-class, science based organisation with the competence to protect the Nigerian people from the threats from diseases of public health importance