The Role of Biosurveillance in Rumour Capture and Validation of Lassa Fever Cases between (January-October, 2018) in Nigeria

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Concept of Biosurveillance

• Strategy for monitoring chemical, agricultural, and biological threats is critical to both public health and national security

• Chemical agents, engineered diseases, and agricultural threats can cause widespread panic, and kill hundreds of thousands of people. Example; Ebola in Nigeria (2004)

• System in place, a government is better equipped to identify and eliminate threats before reaching the public
Objective

• To describe Biosurveillance system and its use to capture 2018 Lassa fever at NCDC
Biosurveillance Process

Data
- Unstructured data, Rumors & Events

Information
- Disease burden and health risks
- Tracking program impact or success
- Early warning of public health emergencies

Action
- Priority setting
- Verification
- Effective response
Tataafo: Web Based / Social Media Tool for Public Health Surveillance

Data Source

Processing

Reports

Review and use

Administrator

NCDC
Methods: Stages of Validation of Lassa fever Rumors at NCDC

1. Acquisition of data (ranging from rumours on discussion sites to news media to validated official reports)

2. Extraction of articles are then categorized by pathogen and location of the event or / and outbreak in question.

3. Identified threats/ rumours are escalated to the NCDC Surveillance Team for verification, Validation and further Public Health action(s).

4. Verified events are filtered by their relevance and necessary action(s) is/are initiated for response.
Results Generated from the Captured Lassa fever Rumours

- 481 Publications from various media sites
- 8689 Signals captured
- 182 (2.08%) suspected cases captured and escalated
  - 64 (35.2%) Validated after verification
    - 49 (76.6%) Events unknown before escalation
    - 15 (23.4%) Events either known or recaptured
To what extent has Biosurveillance integrated in Lassa fever rumor capturing at NCDC?

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<td>1</td>
<td>Capture and extract unstructured data which include; videos, images, tweets and detection of public health events</td>
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<td>2</td>
<td>Identify and exchange information with other surveillance and professional groups in-country and externally</td>
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<td>Support a national network at NCDC towards increasing public awareness of disease outbreaks prior to their formal verification.</td>
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<td>The availability of regular/real-time web-based news media provides an alternative public health information source at NCDC and under-resourced areas</td>
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<td>5</td>
<td>Facilitate channels to rapidly communicate with national authorities in response to potential public health emergencies</td>
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<td>Provide a synthesis of collated and analyzed data to inform policy and decision-making by relevant authorities</td>
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Conclusions

• The delay in response to Lassa fever outbreak could have been detected earlier if systems were in place to support the routine data surveillance.

• There is need to strengthen the IDSR system, develop preparedness plans, and build capacity in the use of Tataafo in state and local levels.

• Prioritizing these actions will aid in the timely response to future Lassa Fever outbreaks.
Recommendations

• Regions with the least advanced communication infrastructure also tend to carry the greatest infectious disease burden and risk, system development must be aimed at closing the gaps in these critical areas.

• Achieving global coverage requires attention to creating and capturing locally feasible channels of communication.

• It also involves making the outputs of the system more accessible to users in these regions through user interfaces in additional languages and low-bandwidth display options, including mobile phone alerts.
Thank You!!!