Increase in Lassa Fever Cases in Nigeria, January–March 2018

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We reviewed data pertaining to the massive wave of Lassa fever cases that occurred in Nigeria in 2018. No new virus strains were detected, but in 2018, the outbreak response was intensified, additional diagnostic support was available, and surveillance sensitivity increased. These factors probably contributed to the high case count.

A massive wave of laboratory-confirmed cases of Lassa fever occurred in Nigeria in 2018. Whether this high case count was caused by a new virus variant, increased seasonal incidence, improved case recognition, availability of laboratory diagnostics and therapy, or a combination of these factors is unknown. We set out to determine the factors that contributed to this outbreak using data available through the Nigerian Disease Surveillance System.

Lassa fever is endemic in Nigeria and peaks during the first 12 weeks of the year (January–March; Figure) (https://ncdc.gov.ng/themes/common/files/sitreps/b7cd-08e8047e52ceabb09e5318a3b0a7.pdf). A total of 107

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received strong media attention in early January 2018 because of an incident in a healthcare facility where 3 of 4 infected healthcare workers died.

Surveillance data are incomplete for 2018, but higher surveillance sensitivity is visible in the available data from the peak 2017 and 2018 seasons. The percentage of suspected Lassa fever cases testing positive decreased from 31.0% in 2017 to 21.6% in 2018 (30.2% decrease). Nosebleed, an indicator of disease severity in nonfatal confirmed cases, was noted on 10.8% of case report forms for surviving patients in 2017, but this frequency declined to 2.6% in 2018 (75.9% decrease), and the case-fatality ratio among confirmed and probable cases declined from 43.9% in 2017 to 25.8% in 2018 (41.2% decrease). Disease severity and case-fatality ratios are also influenced by the timeliness of patients seeking treatment and treatment availability. The decrease in the 3 aforementioned factors (percentage of Lassa virus–positive cases, percentage of nonfatal confirmed cases with nosebleeds, and case-fatality ratio) reflects lowering of the surveillance threshold to detect cases. More patients with comparatively mild disease probably sought treatment because of the increased Lassa fever publicity and communication about available therapy; moreover, additional suspected cases were probably detected in the community through enhanced contact tracing and active case finding.

In conclusion, we cannot exclude that early 2018 represents a particularly active Lassa fever season in Nigeria, especially in Edo, Ondo, and Ebonyi. However, no available evidence indicates that higher case numbers could be attributed to new virus strains. The addition of new laboratories with growing surveillance capacities, an overall intensified response, and increasing surveillance sensitivity are likely major drivers of the high number of Lassa fever cases reported in early 2018. The weekly case numbers reported in early 2019 slightly surpass those from 2018 (https://ncdc.gov.ng/themes/common/files/sitreps/b94e459c79a59ca9d667a555393eda5db.pdf). Improved identification of Lassa fever cases in Nigeria provides the basis for epidemiologic studies of disease and effective disease control. Also, each identified case treated in isolation centers reduces the likelihood of person-to-person transmission.

About the Author
Mrs. Ilori is the national Lassa Fever Technical Working Group team lead at the Nigeria Centre for Disease Control in Abuja, Nigeria. She coordinates the Lassa fever response activities and production of various guidelines for Lassa fever control in Nigeria. Dr. Frank is an epidemiologist at the Robert Koch Institute in Berlin, Germany. Her research interests are emerging infections and zoonoses.

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