

The epidemiology of Lassa fever in Ghana: A study on the 2023 Lassa fever outbreak in Ghana

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Introduction

Viral disease outbreak remains a key public health concern given its impact on life and livelihood. Historical data suggests Lassa Fever is endemic in several West African countries, with sporadic cases occurring elsewhere in the region. In February 2023, Ghana recorded its second outbreak of Lassa fever following that of 2011. To aid in future outbreak investigation and response, the present study sought to document the epidemiology of the recent outbreak in Ghana.

Methods

The study is a cross-sectional quantitative analytical study. The data presented in the study include demographic, clinical, and test results data. The demographic and clinical data were captured from the case investigation forms accompanying samples submitted to Noguchi Memorial Institute for Medical Research between February and March 2023 for Lassa fever testing. The Test results data were obtained from Polymerase chain reaction amplification of samples received. Sample processing and testing were carried out according to the kit's manufacturer's protocol. Ribonucleic Acid isolation was carried out using the QIAmp RNA

kit. Polymerase chain reaction amplification processes were performed using the Qiagen OneStep RT PCR protocol. Data management and analysis were done using Microsoft Excel and STATA. Descriptive analysis was used to analyse and report the demographic and clinical characteristics. Inferential statistics was used to determine associations between the study variables.

Results

The overall positivity rate was 5.19% out of the 539 samples received. Most cases were confirmed in the Month of February. Positivity rate was higher among females (5.65%). Over 90% of all confirmed cases were from the Greater Accra Region. Case burden for LF was highest among healthcare professionals and adults aged 25-35 years. The commonly reported symptoms among confirmed cases included headache, intense fatigue, fever, and muscle/joint pain.

Conclusion

Transmission was largely through contact with the highest burden among healthcare workers.