

# Respiratory Syncytial Virus-Related Severe Acute Lower Respiratory Tract Infection Among Under-Fives at a Public Tertiary Hospital in Northwestern Nigeria: Epidemiology and Seasonality.

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## Abstract

**Abstract:** Background- Globally, 33 million cases of Respiratory Syncytial Virus (RSV) infections occur annually among under-fives. Ninety-nine percent of deaths from RSV occur in low- and middle-income countries. Under-five pneumonia mortality in Nigeria was estimated at 140,520 in 2017, but RSV epidemiological data is scant due to poor awareness and limited testing. Vaccines for RSV are currently under development and RSV mortality data from this high-mortality low resource setting are essential to maximizing the potential benefit of vaccination as well as promoting vaccine uptake. This study aimed to describe the epidemiology and seasonality of RSV-ALRTI in children younger than 5 years in Zaria, Northwestern Nigeria. Methods-A prospective cohort study was conducted among children aged 1 month to 5 years who were hospitalized with acute lower respiratory tract infection (ALRTI) in the Emergency Pediatric Unit of Ahmadu Bello University Teaching Hospital from November 2018 to November 2019. Naso-pharyngeal swabs were obtained for RSV testing using a point-of-care immunoassay technique. Results- Thirty-three percent (35/106) of the children had RSV-related ALRTI. The median age of RSV-positive cases was 8 months (IQR 3-14). Two-thirds of children (68.6%, 24/35) were below 12 months. The RSV mortality rate was 5.7% (2/35). RSV occurred in 10 months of the year with peaks in March and July. conclusions- A third of admitted children with ALRTI were positive for RSV. RSV significantly contributes to childhood pneumonia and testing will raise awareness of this important pathogen. The dual seasonal peak observed in our study may have implications for vaccine implementation.

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Table 1\_clinical and sociodemographic characteristics\_RSV.docx available at <https://authorea.com/users/740260/articles/713297-respiratory-syncytial-virus-related-severe-acute-lower-respiratory-tract-infection-among-under-fives-at-a-public-tertiary-hospital-in-northwestern-nigeria-epidemiology-and-seasonality>