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Epidemiological Characterization of COVID-19 Outbreak in Bauchi State, Northeastern Nigeria, March, 2020 -November, 2021: Role of One Health Approach

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ABSTRACT

Background: The index case of corona virus disease -2019 (COVID -19) in Nigeria was reported on 24th February 2020. Since then Nigeria has recorded over 213 ,321 confirmed cases from 3,440 ,172 samples and 2,973 deaths as of 16th November 2021. An outbreak of COVID-19 was declared in Bauchi state on the 22nd of March, 2020 (epi- week 13) when the first case was reported. We assessed the role of the one health approach to outbreak management and described the outbreak in person, place and time.

Methods : We activated a multi -sectoral Public Health Emergency Operation Center (PHEOC) at the state level and constituted one health teams to propagate pillar specific activities. We defined a suspected and confirmed COVID-19 case in conformity with IDSR technical guidelines , reviewed case investigation forms, hospital records, line-listed new patients, followed up contacts and processed blood samples. We conducted environmental assessment and risk analysis across the state and calculated frequencies/proportions and associations.

Results: We line-listed 28,709 suspected cases of COVID-19 in Bauchi state, of which 1,776 were PCR-confirmed with a case fatality rate (CFR) of 1.3%. The median age of positive cases was 29 years and 59.0% (1,047) were males. Majority, 1, 456 (82%) of the confirmed cases were from the 7 most affected LGAs. Bauchi South Senatorial district had the highest burden of disease 1,225(69.0%). Only 593(33.4%) of cases presented with moderate to severe symptoms, of whom 475(26.7 %) had fever, and 5(0.3%) required intensive care unit admission. There was high healthcare workers' infection 217(12.2%), and 21(91.3%) of the recorded mortalities were over 60 years and had co-morbidities.

Conclusions: COVID -19 outbreak in Bauchi state was characterized by low CFR despite multiple waves of community transmission. We intensified risk communication, social mobilization activities, encouraged COVID-19 vaccination, and recommended strengthening of the state's surveillance system.

Key words: COVID-19, outbreak response, emergency operation center, Bauchi, Nigeria