



## Letter to the Editor

## The outbreak of anthrax in Nigeria: Re-enforcing one health

Dear Editor,

The outbreak of Anthrax disease in a mixed livestock farm in Niger State, Nigeria has been officially confirmed by the Federal Ministry of Agriculture and Rural Development (FMARD) [1]. The present occurrence represents the initial instance of an animal case being documented in Nigeria subsequent to the commencement of the West Africa outbreak in Ghana in June 2023 [1]. The occurrence of unexpected livestock fatalities, resulting in a total of eight (8) deaths, was reported on July 13th, 2023, at this particular farm [1]. Furthermore, it was observed that the deceased animals exhibited hemorrhaging from external bodily openings, characterized by the absence of blood coagulation [1].

The presence of Anthrax in Nigeria presents an obstacle in the pursuit of the "One Health" framework. The One Health approach acknowledges the interconnectedness of human health, animal health, and the environment, highlighting the importance of collaborative endeavors across various sectors in order to tackle health challenges [2].

Ongoing efforts are being made to conduct further investigation in order to ascertain the origin of the infection and to determine its transmission to other farms and humans [1]. While there have been documented instances of human exposure, there have however been no reported cases thus far of human symptoms or mortality. The Nigeria Centre for Disease Control and Prevention (NCDC) are presently engaged in a collaborative effort with the Niger State Ministry of Health and Agriculture to ascertain, and monitor individuals who have come into contact with the disease in question [1].

Within the context of One Health, it is imperative to underscore several salient aspects that elucidate the formidable nature of the anthrax outbreak in Nigeria. The interdependence of human and animal health by anthrax is classified as a zoonotic disease, denoting its potential for transmission between animal and human populations [2]. The disease predominantly impacts livestock, specifically cattle, sheep, and goats. However, there is also a potential for human infection through direct contact with infected animals or their byproducts [2]. The interdependence between veterinary and human health sectors necessitates the adoption of a collaborative approach.

Limited surveillance and reporting systems pose a significant challenge in the timely detection and response to anthrax cases in Nigeria, as robust and efficient disease surveillance and reporting systems are essential in this regard [3]. Nevertheless, resource-constrained environments such as Nigeria may encounter obstacles when it comes to executing and organizing surveillance endeavors that encompass both human and animal health domains [3]. It is imperative to enhance the robustness of these systems and facilitate the exchange of information across various sectors [3].

The low provision of high-quality veterinary services, especially in rural regions where anthrax outbreaks are more prevalent, may be constrained [4]. The lack of adequate veterinary infrastructure, which

encompasses diagnostic capacities and well-trained personnel, poses a significant obstacle to the prompt identification, management, and mitigation of anthrax in animals [4]. Enhancing the capabilities of veterinary services and enhancing their integration within the wider healthcare system are crucial for the successful management of disease control measures.

It is crucial to consider environmental factors, such as the appropriate disposal of animal carcasses and the decontamination of impacted areas, in order to effectively mitigate the risk of further transmission. Collaborative efforts among Nigerian health authorities, policymakers, and stakeholders are imperative in formulating and executing all-encompassing One Health approaches aimed at mitigating anthrax and other zoonotic diseases [5]. These endeavors hold the potential to enhance the overall health and welfare of both animal and human populations within Nigeria.

## Declaration of competing interest

The authors declare no competing of interest.

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