

Perspective

As Ebola winds down, Lassa Fever reemerges yet again in West Africa

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The longest and most impactful Ebola virus disease (EVD) outbreak is finally slowing down, which has so far infected 28,638 people and claimed 11,316 lives [1]. This EVD outbreak covered the largest geographic area to date, spreading to eight countries across three continents in its rage. Two other countries appeared on the EVD map following a medical evacuation and the return of an EVD volunteer to her country, before subsequently developing the disease [1]. The outbreak has lasted an unprecedented 22 months and challenged previously held beliefs about the virus after reemerging, following an initial declaration of the outbreak's end in Liberia and Sierra Leone [2]. Its reemergence in Liberia was attributed to the persistence of the virus in the semen of an individual who had clinically recovered from the disease [1].

The outbreak spread to Nigeria in 2014, resulting in twenty infections and eight deaths [1]. As Nigeria joined the world to watch the end of the outbreak, another hemorrhagic fever reappeared in the country [3]. Lassa Fever, which was first identified in Nigeria in 1969 has reemerged [4] and like Ebola, it is caused by a virus but of the Arenaviridae family. Globally, it is estimated that between 100,000 and 300,000 Lassa fever cases occur annually, mostly asymptomatic, resulting in 5,000 deaths [4,5]. However, a heightened level of awareness has been causing anxiety and panic in Nigeria, coupled with unavailable data on the annual disease trend in the country. By 22 January 2016, the virus had already been reported across 17 of Nigeria's 36 states and Federal Capital and had infected 212 individuals, resulting in 72 fatalities at a case fatality rate of 34% [6]. There is fear of the outbreak spreading rapidly across the country.

Unlike EVD, which has fruit bats residing in the forest as its reservoir, the host for Lassa fever is the multimammate rat, found across Nigeria including in homes. This means a greater risk of Lassa fever transmission to humans compared to EVD, arising from the closer proximity of the host to humans. Though this is not the first Lassa fever outbreak in Nigeria, very recent memory of the intractable EVD has raised the level of awareness and anxiety on hemorrhagic fevers.

There is limited information on the ecological distribution of rodents in Nigeria. However, following personal observation, many freely roam the streets of many of Nigeria's cities, including Lagos. The first EVD case in Nigeria and its containment success were recorded in Lagos state. Yet, should Lassa fever present in Lagos, it is unlikely that the success quickly recorded in the control of the EVD will be repeated. This is due to the fact that the reservoir of the virus freely lives among people.

Lagos state harbors about 21 million people, 11.6% of the Nigerian population, despite covering only 0.38% of the country's landmass [7]. Thus, the population density in Lagos is very high. Overcrowding promotes dirt and allows rat populations to grow. In order to address the risk of Lassa fever spreading in Lagos and across Nigeria, there is an urgent need to control rat population in human settlements. Furthermore, the efficiency of the Integrated Disease Surveillance and Response (IDSR), the system for routinely monitoring infectious diseases which was adopted by Nigeria in 1998 as a means of implementing the International Health Regulations has been called to question [8]. There is an urgent need to reposition the IDSR to be able to provide ongoing levels of infectious

diseases, such as Lassa fever, in order to identify when an aberration to the status quo has occurred.

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