

Letter to the editors

Elimination of canine rabies in Nigeria: existing gaps and the way forward?

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Elimination of canine rabies in Nigeria: existing gaps and the way forward?

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Rabies accounts for 59,000 deaths per annum worldwide with an economic loss estimated at USD 8.6 billion [1]. In Africa, human rabies is estimated at 21,476 death per annum [2]. Dog-mediated rabies is responsible for 99% of rabies zoonosis, [3,4]. In Nigeria, between 2020 through the second quarter of 2021, 85 and 62 cases of canine rabies were reported [1,5]. As of the first quarter of 2022, a sporadic outbreak of canine rabies has been reported in some states of the federation [1]. Canine rabies is a vaccine-preventable disease of canids. In Nigeria, dog are vaccinated at 3 months of age, with a booster

dose given at one year of age. To achieve the global target for the elimination of canine rabies, the World Health Organization in synergy with its policy on “United against rabies” targeted zero human death from dog-mediated rabies by 2030, launched the global health security agenda in 2014 aimed at presenting a united response against the global threat of rabies and other infectious diseases [1]. However, decades after sporadic outbreaks of canine rabies are still being reported in Nigeria [1], there are existing gaps in the implementation of rabies campaigns in Nigeria that may be inimical to the attainment of zero rabies by 2030. This study identified poor implementation of regulation relating to the distribution, and use, of rabies vaccines in Nigeria. Similarly, rabies vaccine are readily available in most pet pharmacy across the country with poor implementation of regulatory laws on who can procure such vaccines, individual with no veterinary certification access them, thus makes it difficult to track, how many dogs were vaccinated, and whom the vaccinator was, furthermore, the paucity of information on the integrity of the cold chain such vaccine may have been stored are sources of concern. Although the National Veterinary Research Institute (NVRI) in Nigeria produces rabies vaccines for local use, the proliferation of foreign anti-rabies vaccines within the veterinary subsector albeit with antigens different from locally circulating rabies serotypes may account for vaccine failures. Furthermore, there is a paucity of information on the zoo demography of the dog population in Nigeria [6]. This may affect micro-planning, and identification of high-risk zoo-population vis-à-vis vaccines allocation during national canine rabies immunization campaigns. To this end it is instructive to propose the template (Figure 1) which describes the structure, distribution of canine rabies vaccine with a view to improve vaccination coverage, traceability, maintenance of unbroken cold chain, ensures accountability in vaccination against canine rabies by ensuring administration of vaccines that can elicit seroprotection against canine rabies in Nigeria.

Conclusion

Dog-mediated rabies can be eliminated from Nigeria by strengthening regulations targeted at ensuring standards, establishing a structured distribution channel, and curb proliferation and ensure the traceability of vaccines and vaccinators. The Federal Department of Veterinary Services, and the National Veterinary Research Institute (NVRI) should play a leading role in the coordination, and production of canine vaccines in Nigeria. Where there is need to supplement local vaccines with foreign doses, such should be approved by the Department of Veterinary Services after screening such vaccine for antigenic compatibility to circulating local serotype. The State's Department of Veterinary Services should conduct state-wide zoo-population censuses to determine the demography of various canids in Nigeria, this may help in micro-planning and implementation of vaccination campaigns vis-à-vis identification of hard to reach settlement and high-risk populations for prioritization. Veterinary units should strengthen surveillance to monitor the incidence of canine rabies within their jurisdictions; these measures should be complemented with a public enlightenment campaign on the risk associated with dog-mediated rabies and the measures to prevent them.

Competing interests

The author declares no competing interest.

Authors' contributions

Okoli Solomon Chieloka wrote this manuscript. He has read and agreed to the final manuscript.

Figure

Figure 1: organizational structure for effective implementation of canine rabies vaccination campaign in Nigeria

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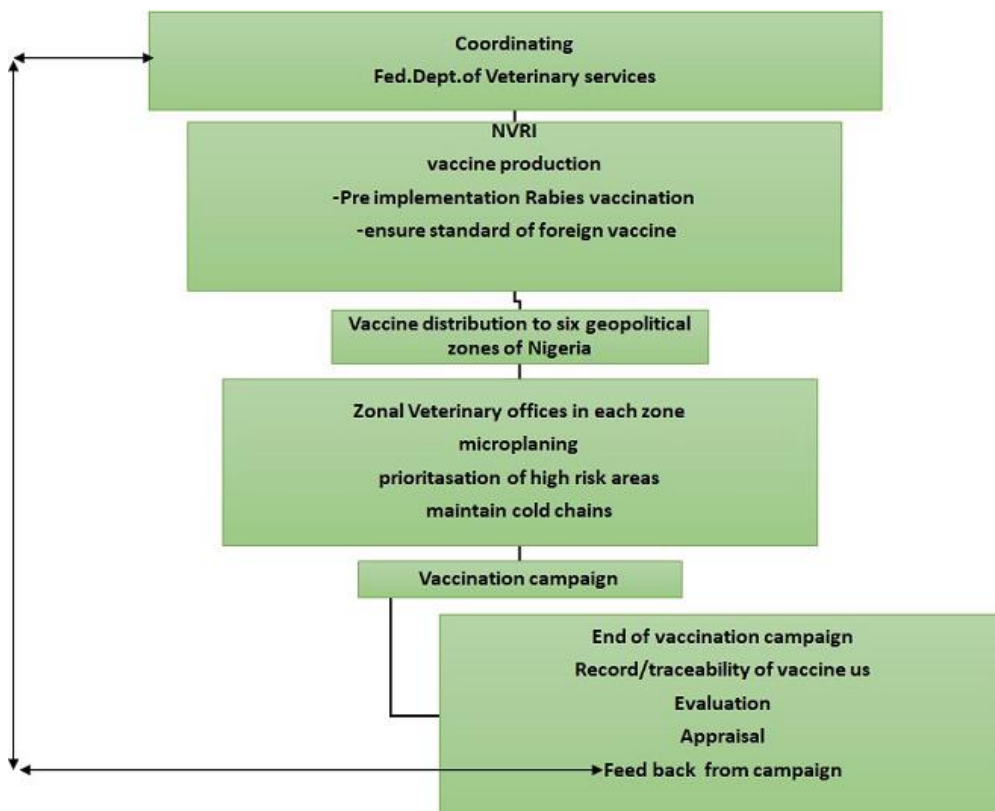


Figure 1: organizational structure for effective implementation of canine rabies vaccination campaign in Nigeria