

CHALLENGES AND OPTIONS FOR DEVELOPING LEPTOSPIROSIS VACCINE EFFECTIVENESS IN NIGERIA

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Reports of leptospirosis in Nigeria as a very important but neglected re-emerging infectious disease of humans, livestock and companion animals have been documented. Cattle, rodents and a host of other wildlife have been documented as reservoir hosts to leptospire. In Nigeria, tentative diagnosis is often based on clinical signs, many of which are common to some febrile conditions such as babesiosis in animals, malaria and typhoid fever in humans. It is detrimental to the livestock industry because it causes abortions, stillbirths, infertility, reduction in milk production and death. In companion animals, it affects the renal, hepatic, respiratory and vascular systems causing high morbidity and death. It has high public health importance because it is transmissible to man, causing multisystem febrile illness, with hepatic, renal and pulmonary involvement leading to high mortality. Early and rapid diagnosis of leptospirosis is not readily available in Nigeria. For this reason, prevention of the disease is necessary. However, this organism has about 250 serovars, 25 serogroups and 13 pathogenic species seven of which are topmost in the list of causes of human and animal leptospirosis. The review showed that little work has been done to isolate and identify locally circulating serovars in both human and animal populations and that bacterins imported for use in dogs have been described to have limited success. The review also inferred that innovative development of appropriate vaccines in form of oral, multivalent and DIVA vaccines for the prevention of the infection and carrier status in human and animal populations in Nigeria is necessary.

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