

HOW UNIVERSITY STUDENT INTERNS ARE MAKING A DIFFERENCE IN THE FIGHT AGAINST RABIES IN CAMEROON

Every year, health facilities and traditional healers or Ethnomedicine in Cameroon receive cases of dog bites. Rabies is endemic in Cameroon and poses a major public health problem, with an increase in human deaths since 2013. However, the lack of a proper documentation system related to rabies incidence, and prevalence undermines the possible efforts to control and eliminate the disease by 2030 as defined in the National Rabies Elimination Plan. The lack of comprehensive data further results in uncoordinated efforts among the different actors and sectors, rendering it difficult to design appropriate interventions and mobilize adequate resources.

Decision-makers have paid particular attention to rabies by classifying it as a priority zoonotic disease, with the support of the national "One Health" platform. The national One Health platform pools together multi-sectoral disciplines including public health, environmental health, and animal health to address health challenges in Cameroon. The Africa One Health University Network (AFROHUN) is a network of universities that develops and strengthens a One Health workforce that is ready to detect, prepare, prevent, and respond to disease threats and outbreaks, through training and capacity development. The network of universities participates and contributes to some activities of the National One Health platform in Cameroon.

As part of the initiatives to generate evidence to inform the country rabies control plans, two student interns from the School of Veterinary Medicine and Sciences from the University of Ngaoundere (SVMS-UN) – a member of AFROHUN, undertook two research studies from January to November 2023. This paper highlights the two students' experiences during their placement at the Cameroon Epidemiology Surveillance Network for Animal Disease (CENAD).

During the internship, the two students collaborated with different stakeholders at the national, regional and local levels. These included policy-makers, public health professionals, veterinary health professionals, environmental health professionals, international organizations, wildlife professionals, traditional leaders and educational community leaders. The interns used workshops, seminars, interviews and video conferences to interact with the actors. This exposed them to a diverse network of actors enabling them to appreciate the need for a multidisciplinary teams and effective communication skills in addressing health challenges.

The studies sought to understand trends and the description of historical rabies outbreaks and produced a map of geographical distribution and associated risk factors for both animals and humans. The study further identified rabies control measures and assessed their strengths, weaknesses, opportunities and threats. This data helped evaluate the effectiveness and feasibility of various control strategies, with the aim of identifying evidence based actions.

The study provided a better understanding of the geographical and temporal patterns of rabies transmission, highlighting high-risk areas and crucial periods. Further, it revealed an increasing pattern of disease outbreaks in space and time, with a high rate of animal rabies cases and human rabies cases, mainly concentrated in the Centre, North and Far North regions of Cameroon. It also revealed the associated risk factors that led to an increase in rabies, particularly in urban areas (62%), population density (23%), the driest average quarterly temperatures (1.4%), cultivated vegetation (1.6%) and solar radiation (1.2%). The stakeholder assessments of rabies control strategies enriched the study findings. Here are some of their extracts from their voices.





“There is a need for collaboration between the animal sector and human sector in case of a suspected dog bite, and a need to undertake a thorough investigation within the first 72 hours. There is also low population awareness”.

“Some of the challenges in controlling rabies is the lack of operationalization of anti-rabid centers, lack of trained personnel, a lack of data on dog management and also a need to reinforce prophylactic treatments by public health personnel.”

The interns realized that the implications of the study went far beyond statistical significance. It led to development of a road map for the implementation of appropriate solutions to rabies control in the local context. In addition, the combination of results from research and from the community underscored the essential role of community initiatives in promoting long-term change.

The results of their findings have benefited the Ministry of Public Health, the Ministry of Livestock, Fisheries and Animal Industries, as well as international organizations such as FAO and WOA. These actors are currently using these results to implement rabies control strategies in the two high-risk pilot regions (the Centre and the Far-North regions) of the country on RACE-Project, which has been running since November 2023.

Though much is still to be done for rabies prevention and control, the interns recommend a need to review and update rabies legislation and regulations, to involve all sectors as set out in the NREP (in particular the decentralized territorial authorities, traditional practitioners, private clinics, the wildlife sector and community leaders), to intensify vaccination campaigns in rural and high-risk areas, to provide pre-exposure prophylaxis vaccines to at-risk stakeholders and to strengthen surveillance, particularly in the wildlife sector.

The internship program further benefited the students who participated. Mesembe Titi observes that *“As students, we benefited from capacity building through trainings and got opportunity to network with different sectors creating job openings. In addition, the effective communication skills to address this disease in the university and its surrounding community as leaders is invaluable.”*

The program has demonstrated the vital role that universities play in creating solutions to the health challenges in society, and building a workforce that is critical to solving health challenges in Africa. It has also enabled the students to gain skills required in the job market and their direct contribution to the development of the nation and the continent.



Phases of stakeholders engagement



This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the AFROHUN Transition Award implementing partners and do not necessarily reflect the views of USAID or the United States Government.