





IN TORORO DISTRICT, UGANDA

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STUDENTS GAIN ONE HEALTH COMPETENCIES AND RAISE COMMUNITY AWARENESS ON RABIES IN TORORO DISTRICT, UGANDA





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Harriet (not her real name) recently lost her son to a disease she did not know. Her son had complained of body weakness, confusion, fever, headache, and an itching around the wound. He had anxiety, hallucinations, feared water, was easily agitated and lacked sleep. She later learned that her son died of a disease called rabies caused by a dog bite. Harriet is not the only one.

kills more Rabies than 59,000 people per year across the world with most deaths recorded in Asia and Africa. Between 2021 and 2023, more than 41,000 people were suspected to have rabies. In the same year Uganda recorded 105 deaths due to rabies. Tororo district in Eastern Uganda recorded over 260 dog bites in 2022. Studies reveal that community awareness on rabies control remains limited.



A faculty fellow with graduate student interns in the field in Tororo District

Rabies is an incurable disease that affects both animals and humans. It is predominantly transmitted by infected or rabid dogs. One rabid dog can bite many people in a very short time causing unprecedented harm or loss of lives. In 2017, Uganda developed a One Health Strategic Plan that prioritized seven zoonotic diseases including rabies. In 2020, the country established a Regional Emergency Operational Centre (EOC) in Eastern Uganda as part of the efforts to control and manage public health emergencies in the Mbale -Tororo region.

The African One Health University network (AFROHUN), builds capacity of a local One Health workforce to prevent, prepare, detect and respond to zoonotic disease threats including rabies in the African region through research and training using experiential learning. AFROHUN is a network of 26 Universities in Africa promoting One Health, a multidisciplinary approach that seeks in enhance collaboration between veterinary, environment, public health, and social sciences to addressing complex health issues. AFROHUN through the USAID-supported Transition Award (TA), implemented a graduate student internship and faculty fellowship. The programme involved placement of one faculty fellow and two graduate student interns at the EOC regional office in Mbale. The fellow and interns were involved in different One Health activities including personal research focusing on the rabies in Tororo district. The study finding is expected to inform the district's rabies control plan.

A key finding of their study was the lack of awareness about rabies and its control. Only 29% of the respondents had knowledge of rabies control. In response, the students working with EOC, community leaders, Human and Veterinary departments developed health education posters for rabies prevention including related first aid in case of a dog bite. The posters once approved by the relevant authorities will be disseminated at the community engagement meetings, in hospitals, and veterinary offices.

As part of their placement, the interns led by the faculty fellow conducted a stakeholder engagement workshop to share their findings and seek community perspectives on rabies control. Guided on One Health Approach, the students discussed the findings and developed recommendations including an implementation strategy.

"Working together is what we need, representatives from various disciplines, including human health, veterinary medicine, environmental conservation, and community members, have gathered to explore potential rabies prevention strategies," a district leader said.

The student interns described their experience as a key step in their career growth. Lydia Namakula Nabawanuka, a Master of Environmental and Occupation Health Science student at Makerere University School of Public Health notes that the internship developed their One Health competencies.

'It was my first time to work in One Health. We discussed about the human and the animal health departments when we were in the field and realized that they are not working together in practice. This needs to change,' Lydia observed.

Monica Mpumwire, also a Master of Biomedical Laboratory Technology Student appreciates the opportunity to work with other disciplines to address rabies and other diseases. 'Beyond my lab profession, I learned to work with other disciplines', says Monica. For the interns, they have already started applying the gained knowledge and skills in their work and look forward to continue. 'We have had another project and I apply the skills that I obtained from our fellowship in AFROHUN, taking into account multidisciplinary approach to issues, and my skills in data analysis and reporting have improved,' says Monica.

The interns further disclosed that working with the faculty fellow, Dr. Dickson Tayebwa, a PHD student and Assistant Lecturer at Makerere University, Department of Veterinary Pharmacy, Clinical and Comparative Medicine, facilitated a one-on-one mentorship for the students in rabies control, coordination, and general work principles.

'Dr. Dickson Tayebwa was so resourceful in the rabies project from inception, to implementation until the end. We held reflection meetings each day to determine what went right and areas of improvement', says Monica.



Graduate student intern and faculty fellow at the EOC Mbale office planning for the stakeholders engagement workshop on rabies control in Tororo district

The Fellow also appreciated the experience highlighting how it further built his knowledge, network, skills and exposure to the One Health global and national efforts which he looked forward to using in future. I enjoyed working with the interns, their resilience, and commitment. We also received training on using the DHIS2 tool, the Integrated Disease Surveillance and Response (IDSR) framework. National Action Plan for Health Security (NAPHS), and collaborating with others,' said Dr Tayebwa Dickson.

The student internship placement with a faculty fellow is an approach that can significantly contribute to the One Health workforce development efforts. This program if implemented at scale has the potential to create a network of practitioners to sustain multidisciplinary learning, practice and collaboration, which is key for global health security agenda (GHSA). The GHSA is a global effort to strengthen the world's ability to prevent, detect, and respond to infectious disease threats.

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