

Mobile phone surveillance could help tackle rabies

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A mobile-phone-based system for rabies surveillance in Tanzania is demonstrating huge potential for mobile technologies to improve public health service delivery, especially in resource-poor settings, according to a new article in *PLOS Medicine* by Katie Hampson from the University of Glasgow, UK, and colleagues.

The article describes the implementation and evaluation of a large-scale [surveillance](#) system for [rabies](#) in southern Tanzania. Rabies is a fatal disease that kills thousands of people every year in low and [middle income countries](#), where it is primarily spread by domestic dogs. Following a bite, [human rabies](#) deaths can be prevented through prompt administration of a course of vaccinations administered over several weeks, together with antibody administration for high-risk exposures. More proactively, the risk of exposure can be reduced and the disease ultimately eliminated through well-implemented mass vaccination programmes for dogs. However, coordinating these activities requires disease surveillance that can be a challenge in resource-limited settings.

Since 2011, the researchers have been monitoring a cross-sector mobile phone-based (mHealth) system that they developed and implemented for rabies surveillance across southern Tanzania. The system was used to report real-time instances of rabid animal bites on humans, as well as human and animal rabies vaccination use. It is currently used by more than 300 frontline health and veterinary workers in a 150k square km area with more than 10 million inhabitants.

The authors note, "[t]he system has facilitated ongoing data collection across large programmatic scales, greatly improving data quality, timeliness, completeness, and cost-effectiveness. The resulting surveillance is being used to evaluate the impacts of ongoing rabies control activities and improve their management, directly informed by the experiences of frontline users. As a result, the system has become an integrated, popular, and valuable tool within the health and veterinary sectors in southern Tanzania."

The overarching research project won the 2016 Guardian University Award in the International Projects category.

More information: Zacharia Mtema et al. Mobile Phones As Surveillance Tools: Implementing and Evaluating a Large-Scale Intersectoral Surveillance System for Rabies in Tanzania, *PLOS Medicine* (2016). [DOI: 10.1371/journal.pmed.1002002](https://doi.org/10.1371/journal.pmed.1002002)

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