Community interventions identified as pragmatic approach to zoonotic disease control in Tanzania

Reducing the risk to livestock and people. For more about ZELS: bbsrc.ukri.org/zels
Community-based interventions to prevent disease transmission from animals to people can provide a more immediate route to impact than livestock vaccinations.

The ZELS project Social, Economic and Environmental Drivers of Zoonoses in Tanzania (SEEDZ), which worked in northern Tanzania, revealed many insights into the challenges and opportunities for controlling zoonoses. In particular, its findings revealed the value of participatory approaches in identifying small but significant changes in behaviour to decrease the risk of disease transmission.

This could prove critical because SEEDZ also found that significant challenges - social, epidemiological and economic - remain in delivering veterinary vaccination programmes in many poor communities and at the scale needed to effectively protect human health.

In addition, medical diagnosis and treatment of zoonoses in people is challenging because these infections, characterised by non-specific fever, are difficult to diagnose and often mistaken as malaria.

However, results suggest that even small improvements in animal health can have benefits for human health, livelihoods, education and equity.

The SEEDZ project studied three zoonoses: Q fever, brucellosis and Rift Valley fever. While epidemiological studies identified disease risk factors, participatory studies helped to understand what type of behaviour-change approaches might be appropriate and feasible. The combination of the two showed how researchers could work with local people to identify and develop effective disease-control solutions - in essence identifying a parallel route to impact, one which is currently more realistic for many communities than livestock vaccination.

In particular, SEEDZ found how focusing on livestock management practices can be positive entry points for talking about zoonoses. A high frequency of consumption of raw milk products and a general lack of awareness about the risks of contact with livestock abortion and parturition products were identified as potential behavioural change points. The team also identified an emerging livestock disease problem, coenurosis, known locally as ormilo, and found that local people’s motivation to manage this very visible disease could be used to draw out potential interventions to mitigate the risk of the less-visible zoonotic diseases.

Researchers are now working with communities, government veterinary and livestock officers and local non-governmental organisations, using this information to develop effective behaviour-change strategies and interventions.

Social, Economic and Environmental Drivers of Disease in Tanzania (SEEDZ)

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- Institute of Development Studies, UK
- Nelson Mandela African Institution of Science and Technology, Tanzania
- Sokoine University of Agriculture, Tanzania
- Kilimanjaro Christian Medical College, Tanzania
- Kilimanjaro Clinical Research Institute, Tanzania
- Ministry of Livestock and Fisheries, Tanzania
- National Institute for Medical Research, Tanzania
- Tanzania Wildlife Research Institute, Tanzania
- University of Otago, New Zealand
- Washington State University, USA

“The SEEDZ research has given a better understanding of the scale, nature and distribution of zoonotic disease impacts - and we have discovered how by working with communities and building trust we can find potential solutions for mitigating these impacts.”

Dr Emanuel Swai, Co-Investigator, Ministry of Livestock and Fisheries, Tanzania.