Call: 9th Call – JPIAMR Joint Call on Diagnostics and Surveillance 2019

Title: Management of animal diseases and antimicrobial use by information and communication technology to control AMR in East Africa

Acronym: MAD-tech-AMR

Project composition

Type	Name	Institute	Country
Coordinator	Susanna Sternberg Lewerin	Swedish University of Agricultural Sciences	Sweden
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Abstract
In low-income countries (LICs), patterns of livestock diseases and antimicrobial use (AMU) are largely unknown, and there are few high-quality laboratory facilities. Robust and actor-centred surveillance systems are needed and surveillance of the dynamics leading to antimicrobial resistance (AMR) should precede more advanced systems. MAD-tech-AMR will develop a framework for surveillance of AMU, diseases that trigger AMU and perceived problems with AMR, for field testing in East African poultry production systems. Information and Communication Technology (ICT) will be coupled with veterinary epidemiology and social science methods. The originality lies in using frontline technology particularly suited for challenges in resource-poor settings, merging low-resource input and high-technology output. The overall aim is to provide an ICT framework for monitoring and control of AMU and AMR in livestock in LICs. MAD-tech-AMR will assess if veterinary telemedicine coupled with ICT systems can change AMU. Baseline data on AMU practices and actors involved will be collected, and incentives and barriers to prudent AMU explored. A platform to register drug purchases and a database to monitor drug sales will be developed along with a mobile application for animal health advice and information about AMR. The ICT framework will be pilot-tested in poultry production systems in Kenya and Uganda. It can be expanded in the future to allow inclusion of diagnostic tools, but the initial focus will be on clinical diagnosis based on tele-consultation and evidence-based therapeutic strategies.