

Assessing Farmers Knowledge, Attitude and Practices (KAP) Towards Antimicrobial Use (AMU) and Antimicrobial Resistance (AMR) in Wakiso and Nakasongola Districts, Uganda, October 2021

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Introduction

AMR is frequently caused by misuse of antimicrobial agents both by humans and animals. Farmers in Uganda can access antimicrobials from pharmacies, drug shops or as government or institutional supplies with or without prescription. The routine inspection of foods for human consumption is not capable to detect the veterinary drug residues or bacterial contamination, these can only be prevented by farmers practices of observing the recommended drug usage, withdrawal periods and improved hygiene during processing. In addition, some farmers reportedly treat their livestock using medicine reserved for human use posing a risk of development of AMR that could be transmitted to the human population. Inappropriate use of antimicrobials can potentially lead to AMR in humans yet the development of new antimicrobial agents to treat the emerging resistant pathogens does not match the rate at which the resistance might develop. The consequences of infection with antimicrobial-resistant organisms can be severe, in the absence of interventions to reverse these trends. Uninformed antimicrobial usage by farmers including knowledge of the course of antimicrobials, their side effects, standard acceptable dosage limits, and consequences of wrong usage, are the potential reasons for inappropriate or incorrect treatment, potentially leading to AMR. The farmers knowledge attitude and practice towards AM usage and resistance and its consequences in Uganda is not fully explored yet these farmers are key drivers of AMR in both humans and animals.

Study objectives

To assess the farmers knowledge, attitudes and practices towards AMU and resistance and the associated factors in Wakiso and Nakasongola districts in Uganda

Methods

We conducted a community based cross sectional study by administering a structured questionnaire. We purposively selected the participants using both veterinary records and snow ball methods. Wakiso has a high population of poultry and piggery farmers while Nakasongola is in the cattle corridor. Both districts are reported to have frequent use of antimicrobials and also known to practice self-treatment.

Results

Among 652 farmers interviewed, with an equal number from each of the study districts, the mean age was 47.6 years, (SD 12.2) ranging from 19 to 87 years, 71% were males and most (29.6%) had completed primary school.

Most of them (71.5%) were cattle farmers, whereas, 49.5%, 40.5%, 10.7%, 61.2% reared goats, pigs, sheep, and chicken respectively.

Most farmers (90.8%) reported they knew or had heard about AMU and AMR, 96.3% of these reported that antimicrobials can be passed on from animals to humans through consumption of products including milk, eggs and meat, while half of them thought antimicrobials were sufficient for treating any kind of animal disease whether viral or bacterial infections and, 46.6% had encountered drug resistance as a side effect while using antimicrobials in animals. With regards to attitudes, 47.3% agreed professional advice before using antimicrobials is recommended, 41.8% agreed imprudent AMU results in irreversible loss of drug effectiveness, and 56.7% agreed using antimicrobial alternatives, like farm biosecurity, good hygienic practice and vaccination can reduce AMR development. For the practices, 62.2% consulted a veterinarian when their animals got sick, 84.4% treat only symptomatic animals, 67.8% use antibiotics for all animal diseases and 17.4% routinely add antimicrobials to animal feeds in the absence of disease. Among 562 who were aware of the Antimicrobials used on their farms, 90.2% used tetracycline 45% Amoxicillin and 59.8% Gentamycin. Knowledge on AMU and AMR was significantly associated with urban versus rural residence, ownership of cattle and keeping poultry.

Conclusion

The overall level of knowledge on AMU and AMR was high, associated with residence, cattle and poultry ownership. The attitudes and practices of farmers towards AMU and AMR in the study area continue to predispose them to huge risk of sustaining the global AMR epidemic. AMR and AMU awareness creation tailored on behavioural change communication should be emphasized.



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