

Knowledge, attitudes, and practices of dairy farmers on antibiotic use and their effects to health in Gweru district, Zimbabwe

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Abstract

Antibiotic resistance is a significant threat to food security, global health, and economic development. The study sought to assess knowledge, attitudes, and practices (KAP) on antibiotic use and their effects to health among dairy farmers in Gweru District, Zimbabwe. A cross-sectional descriptive study was conducted among 100 registered dairy farmers who supplied milk to Dairy Service Unit (DSU) from January 2023 to July 2023. An interviewer-administered questionnaire was used to collect quantitative data on participants' demographic profiles and to estimate KAP scores on antibiotic use among farmers. Data was analyzed descriptively and inferentially with Chi-square test for hypothesized associations with detection of antimicrobial residues. The rate of antibiotic use was high among participants (89 %). Nineteen percent of the participants had antibiotic residues detected qualitatively in milk using the milk test kits. Beta-lactams, tetracyclines and sulphonamides were qualitatively detected in the raw milk samples using test kits. Responses demonstrated good knowledge (83 %), positive attitudes (81 %), and good practice (81 %) on antibiotic use. However, those who had antibiotic residues detected in their raw milk samples scored low on knowledge, attitudes and practice and were more likely to be small-scale farmers who did not have prior exposure to specialized training on dairy farming. Knowledge of antibiotic use was associated with a higher level of formal education ($p < 0.05$). There was no significant association ($p > 0.05$) between the level of formal education and participants' attitudes and practices on antibiotic use. There was a strong relationship between the presence of antibiotic residues in milk and low KAP scores among farmers on antibiotic use ($p < 0.05$). There is need to increase trainings of dairy farmers who had low knowledge levels on antibiotic use to avoid the presence of antibiotic residues in milk which could lead to antibiotic resistance in the general population.