Note on: A Survey on Knowledge, Attitude, and Practices of Large-Animal Farmers towards Antimicrobial Use, Resistance, and Residues in Mymensingh Division of Bangladesh

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In abstract

Introduction: The widespread and indiscriminate use of antimicrobials in food animals is a key contributor to antimicrobial resistance and antimicrobial residue, which have become a growing public and animal health concern in developing countries such as Bangladesh. This study aimed to assess the knowledge, attitude, and practices (KAP) of large-animal farmers towards antimicrobial use (AMU), antimicrobial resistance (AMR), and antimicrobial residue (AR) with their correlation.

Methodology: Cross-sectional survey (Mymensingh division). 212 large-animal farmers (dairy, beef fattening, buffalo, sheep and goat farmers).

Results: Male (85.8%) and age 18-30 yrs. About 20.3% with no formal education. And 48.1% received training regarding AMU and AMR. Farmers who received training on AMU and AMR had 10.014 times (OR = 10.014, 95% CIs: 5.252–19.094), 9.409 times (OR = 9.409, 95% CIs: 4.972–17.806), and 25.994 times (OR = 25.994, 95% CIs: 7.73–87.414) better knowledge, attitude, and performance, respectively, compared to their counterparts.

Conclusion: Used to intervene in the education and training of the farmers, helping them to limit the indiscriminate and irrational use of antibiotics, it will reduce the chances of developing AMR.

Limitations of this study

Cause: Nature of gathering data on human behavior through survey approaches. Since, this research conduct in a small part of Bangladesh. That's why it can't represent the whole country, as well. Have some chances of incorrect recall and social desirability or confirmation bias. The cause-and-effect relationship between the predictor variables and the dependent binary variables (knowledge, attitude, and practice) of large-animal farmers may be influenced by the nature of this cross-sectional survey. The number of questions was also reduced in order to cut down on the time it took to complete the survey.

Conclusion

A significant number of large-animal farm owners/workers have inadequate knowledge, undesirable attitudes, and inappropriate antibiotic use practices towards AMU, AMR, and

antibiotic residues. The present study data suggested that socio-demographic factors such as sex, age, training, farm population size, and particularly level of education have a significant impact on KAP towards AMU, AMR, and antibiotic residues. This study provided baseline evidence concerning the KAP of large-animal farmers, which would help respective authorities to focus future interventions on Bangladesh smallholder livestock farming systems to reduce antimicrobial use and resistance. Regulation and control of the usage of veterinary medication and enacting strong antibiotic prescription legislation in Bangladesh to minimize widespread antimicrobial.