

Compliance of owners with administration of short-term antimicrobials prescribed for their dogs

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Summary

Compliance is the extent to which clients follow a prescribed course of treatment for their pet. The objectives of this study were to describe the level of compliance of owners whose dogs were prescribed antimicrobials, to compare methods of assessing compliance, and to identify determinants of client compliance in companion animal veterinary practice. Four methods of assessing compliance were used: pill count, client reported missed doses, electronic medication monitoring and veterinarian prediction. Of the four major methods of measuring compliance, all were significantly different from one another except for self-report and pill count

Compliance is the extent to which clients follow a prescribed course of treatment for their pet. Medication non-compliance has been a serious issue for physicians for more than fifty years. Veterinary client compliance has not been studied extensively. There are four published studies of compliance with short-term antimicrobials in dogs in Europe and Australia¹⁻⁴ but none in North America. The assessment of compliance is not straightforward and bias can be introduced as a result of the particular method of measuring compliance. The objectives of this study were to describe the level of compliance of owners whose dogs were prescribed antimicrobials, to compare methods of assessing compliance, and to identify determinants of client compliance in companion animal veterinary practice.

Four methods of assessing compliance were used: pill count, client reported missed doses, electronic medication monitoring and veterinarian prediction. Electronic medication monitoring was performed using the Medication Event Monitoring System (MEMS[®] TrackCaps[™], APREX, a Division of AARDEX[®] Ltd., Union City, California). Data stored in the caps were downloaded at the end of the study. Owners of dogs who were prescribed antibiotics for an acute, uncomplicated bacterial infection were invited to participate in a "Review of Veterinary Services in Companion Animal Practice" that required them to return for a follow-up visit. Owners were asked to bring all of their pet's medication containers with them to the second visit for a "medication label review". A pill count was performed and the electronic monitoring device was collected while the owner completed a questionnaire. The attending veterinarian was asked to complete a questionnaire, predict owner compliance, and to assess treatment outcome. Client participants were

given only partial information on the study objectives when they entered the study. The compliance aspect of the study was explained to owners once they turned in their completed questionnaire. This study was approved by the University of Saskatchewan Advisory Committee on Ethics in Behavioral Sciences.

A total of 90 cases were enrolled with the majority of cases being prescribed twice daily antimicrobial therapy. Owner compliance in this study was good, although the degree of compliance depended on the definition and method of assessment. The average compliance rates fell in a progressive manner as the method of assessment became more refined. Of the four major methods of measuring compliance, all were significantly different from one another except for self-report and pill count. Two separate logistic regression analyses were carried out. The first logistic regression included perfect MEMS[®] dose taking compliance as the outcome (100% compliance vs. <100% of prescribed bottle openings) and the second was performed using the lower of client reported and pill count compliance as the dichotomous outcome (perfect or <100%) of combined compliance. A final model was fit with two independent significant predictors of compliance for each analysis. The results of these analyses will be presented.

References

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