

Analysis of a practice management computer software program for owner  
Compliance with recall reminders.

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### Summary

The objectives of this study were to describe the level of compliance of clients with reminders generated by one veterinary practice management program and to identify factors associated with owner response to a recall. This study showed that client response to a recall notice was significantly associated with several factors that could be used to guide changes to a clinic's reminder system to improve compliance with recommended preventive veterinary care. For example, investigating the records of clients who had not spent any money in the last year would reveal how long these clients have been with the practice, how long ago their last visit was and what service was provided. The findings of this study also suggested the need for database maintenance in order to maximize the efficiency and effectiveness of the reminder system.

Veterinary clinics use computer software packages built on database platforms for client records and invoicing. Most veterinary practice management systems also offer automatic reminders issued for follow-up treatments, vaccinations, and recommended procedures. Conversations with practitioners in western Canada suggested that most clinics did not seem to be tracking the use and success of reminders. When asked to quantify how well reminders work to bring clients in for recommended visits or procedures, most practices were unable to estimate response rates to reminders. Thus, a study was designed to evaluate the effectiveness of a computer reminder system. The objectives of this study were to describe the level of compliance of clients with reminders generated by one veterinary practice management program and to identify factors associated with owner response to a recall.

A local computer software company in Saskatoon, Saskatchewan, Canada conducted a retrospective search of computer records for client recall codes. Six clinics in the 4 western Canadian provinces were contacted by the company programmer and agreed to participate. A data set was generated for each clinic using a database extraction program written to include recall codes issued for vaccinations/annual examinations, recheck or medical progress examinations, neuter surgery, dental procedures and laboratory tests over a 12-month period in 2001-2002. Data were transmitted from the programmer to the investigator as individual spreadsheet files, one for each clinic with a practice identification code and type of

practice. For each recall event the following data were obtained: date of recall, reason for recall, client identification number, pet species (cat or dog), breed (purebred or crossbred), number of pets in household, number and value of client transactions in the previous year, number of years client had been with practice, whether the pet was covered by an insurance plan, whether the client bought pet food from the veterinary practice, whether the client returned to the clinic in response to the recall, and, if so, date of the visit. Analysis of potential determinants of compliance was performed using logistic regression in a commercial software package that allowed multilevel modeling to examine the contribution of practice type and clinic to the variability in the data. Variables with  $P < 0.25$  in simple logistic regression were considered for inclusion in the multiple regression analysis. A manual forward selection strategy was used for regression modeling.

Forty percent (2,493/6,269) of clients contacted with a reminder responded by visiting their veterinary clinic. There were recalls for 4,279 dogs and 1,990 cats. Overall, 40% of pets were purebred although this percentage was much smaller at 7% for cats (143/1,990) compared with 55% for dogs (2,371/4,279). None of the pets were reported to be covered by a pet insurance plan. Only 16% (1,017/6,269) of owners bought pet food from the practices. The majority of recalls were for vaccination (89%) and there were no significant differences in the types of recall codes issued for dogs versus cats. Results showed there were significant associations between compliance with a recall notice and species, money spent in last year, years with practice, pet food bought from clinic, reason for recall, number of pets in household. There was evidence for compliance by clients that had: been with the practice for less than one year, recalls issued for dentals, medical progress examinations and laboratory testing, spent \$1000 or more in the last year, bought pet food from the practice, and owned a cat. There was evidence for non-compliance by clients that had: been with the practice for one to five years, recalls issued for neutering, and spent no money in the last year. The only recorded variables that did not go into the final model were whether the pet was purebred or crossbred and pet insurance.

There were many clients that had no transactions recorded in the previous year. Clients who did not spend any money in the last year may not have been active clients and therefore were less likely to respond to a recall notice because they no longer considered themselves to be clients of the practice. This study showed that client response to a recall notice was significantly associated with several factors that could be used to guide changes to a clinic's reminder system to improve compliance with recommended preventive veterinary care. For example, investigating the records of clients who had not spent any money in the last year would reveal how long these clients have been with the practice, how long ago their last visit was and what service was provided. The findings of this study also suggested the need for database maintenance in order to maximize the efficiency and effectiveness of the reminder system.

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