

Biosecurity practices of midwestern veterinarians in food animal and mixed animal practices

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Introduction

Biosecurity practices are designed to prevent the spread of disease, yet implementation of those practices varies greatly among animal owners and veterinarians. Veterinarians working in food animal and mixed animal practices have a role in the design and implementation of biosecurity protocols for their clients and are responsible for minimizing their potential to act as a disease “fomite” as they move between operations. The objective of this project was to survey Midwestern veterinary practitioners to determine their current implementation of biosecurity and infection control practices.

Materials and Methods

During the spring semester of 2010 and 2011, veterinary students from Iowa State University interviewed 69 veterinarians involved in mobile practice. This was a convenience sample of practitioners that traveled to livestock premises to care for animals. The assessment consisted of two questionnaires. The pre-assessment questionnaire was designed to gather details regarding the scope of the veterinary practice using a series of open-ended questions. These questions dealt with practitioner demographics and included factors such as veterinary college attended, year of graduation, type of clientele, employee types and responsibilities, and the number of farm calls per day. The assessment questionnaire was designed to identify strengths and weaknesses in infection control practices. Sixty-four closed-ended questions with response choices of ‘yes’, ‘no’, ‘maybe’, and ‘N/A’ (not applicable) were utilized. Questions included equipment handling, vehicle cleaning and disinfection procedures, personal protective equipment, training of staff about zoonotic disease concerns, and performing necropsies. Data was analyzed using SAS; *t*-tests were performed on continuous data and Fisher’s exact tests were performed on categorical data. Values of *P* < 0.05 were considered significant.

Results

Of the 69 veterinarians in the data set, 34 were predominately beef practitioners, 11 were predomi-

nately (four exclusive) dairy practitioners, five were predominately (three exclusive) swine practitioners, and 19 were mixed-animal practitioners. The median graduation year was 1996 (range, 1971 to 2010). The number of full-time veterinarians employed with our interviewees ranged from one (self-employed) to 15 with a median of three. Veterinarians within larger practices tended to clean and disinfect dirty equipment before placing it in their practice vehicle, and this was not influenced by having technicians or assistants. The number of full-time veterinary technicians or assistants available for farm calls ranged from zero to five with a median of one. The number of part-time assistants ranged from zero to two. Thirty-one practitioners indicated that they made an average of three to five farm calls per day; whereas 13 made an average of six to 10 calls. Over 90% of the practitioners in this survey did not have written infection control procedures for their vehicle. When it came to cleaning and restocking the practice vehicle and equipment used on the farm, the majority (75.4%) reported this was their individual responsibility. At least 85% of the practitioners reported that they removed organic debris prior to disinfecting equipment, wore protective overshoes or boots on farm calls, wore protective gear and used sharp instruments when performing necropsies, and had extra protective clothing available in case of emergencies. However, < 15% of veterinarians responded that their clients provided them with protective footwear and clothing that remained on the farm after their visit.

Significance

This information indicates that graduation year and the type of practice had some influence on biosecurity practices. The presence of technicians or assistants did not always enhance infection control procedures (cleaning equipment, laundry, etc.) An increased awareness of some of the more significant biosecurity practices is needed among Midwest veterinary practitioners in food animal and mixed-animal practices.