

Zoonotic Disease and Infection Control Training for Shelter Workers

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Advancing adoption guarantee shelter practices and methods

Healthy animals are adoptable animals. The purpose of this training is to raise awareness of zoonotic disease signs and symptoms and to review shelter infection control practices. Knowledge of diseases common to animal shelters along with infection control best practices helps prevent disease spread. The result is fewer sick animals and more animals available for adoption instead of spending time in isolation or being euthanized for illness. Zoonotic disease awareness along with infection control strategies help keep animals and their human caretakers healthy.

Naming recognition

Maddies Fund will be acknowledged as the full funding source in all abstracts, publications, presentations and training sessions. This project will be written up as part of a PhD dissertation. It is anticipated that the results of the project will be presented at several national and international meetings including the Conference of Research Workers in Animal Diseases (CRWAD), CSU's CVMBS Research Day and the AVMA annual meeting. It is also anticipated that the results will be published in an animal health journal such as JAVMA.

Project summary

The training project for which we are requesting funding is the third in a three part project. The first project was a Shelter Needs Assessment survey sent out to 158 animal shelters in Colorado, Wyoming, Montana, North Dakota, South Dakota and Utah early in 2007. The needs assessment obtained information on practices, policies, and protocols used by shelters in the area of infection control and zoonotic disease awareness for staff and volunteers as well as the public. The results from this needs assessment confirm that shelters desire training in the areas of infection control (including cleaning and disinfection) and zoonotic disease awareness. The second project currently in progress is looking at environmental contamination with *Salmonella* in Colorado shelters. Of the five shelters sampled so far three have had *Salmonella* positive environmental samples. We estimate 30-40 shelters Colorado shelters participating in this study through fall 2008. Results of this study will be used during the proposed training sessions to inform shelters of potential risks to animals and humans with regard to *Salmonella* and other infectious diseases.

Background information: Both human and veterinary medical communities are concerned about zoonotic disease and zoonotic disease awareness. Over 800 diseases are shared between humans and animals. Many of these diseases, such as rabies, leptospirosis, anthrax, and ringworm have been around for hundreds of years, where others such as methicillin resistant staph aureus (MRSA), SARS, and monkeypox are new and emerging. Individuals in contact with animals are at greater risk of contracting a zoonotic disease. Knowledge of zoonotic diseases, their clinical signs, methods of spread, and good infection control practices can help reduce the risk of disease in both animals and humans.

Animal shelters are a potentially vulnerable population whose exposure to zoonotic diseases may be greater than the general population. Because of the volume of animals with unknown histories encountered on a daily basis, shelter workers may experience greater exposure to zoonotic diseases. In light of the volume and density of animals, control of disease spread can be a major problem in animal shelters. Fighting the spread of disease is one of the most frustrating, time consuming and costly jobs that animal shelters are faced with. Animal shelters vary tremendously in their size, budgets, numbers of employees and volunteers, as well as level of training. In addition, most shelters have high turnover of volunteers and employees, so that even those with adequate training may fall short in having a well informed staff at any one time.

Purpose of training: Our project will increase awareness and knowledge of zoonotic diseases that can occur in animal shelters. Shelter workers and volunteers will be taught about specific diseases as well as infection control basics, to better be able to prevent and control disease transmission in their

shelters. Specific objectives include: (a) review clinical signs and transmission routes of zoonotic diseases of concern to animal shelters along with their common clinical signs and routes of transmission. (e.g. rabies, ringworm, plague, tularemia, leptospirosis, internal parasites, bartonellosis (cat scratch disease), q fever, MRSA, psittacosis, avian influenza); (b) review potential impact of listed zoonotic diseases on immune compromised individuals; (c) review infection control critical for disease prevention and control in animal shelters (including overview of infection control principles, appropriate isolation, cleaning and disinfection); and (e) work through zoonotic disease scenarios that might occur in animal shelters.

Study Design: Twelve training sessions will be conducted (2 in each state) during 2008. Estimated 10-20 participants will be trained during each training session. One or more shelters in each state will participate in each training session. Training will include: (a) Pre-training knowledge assessments given to participants (common zoonotic diseases, common clinical signs and modes of transmission along with an infection control scenario requiring fill in the blank answers). (b) PowerPoint presentation and discussion on common zoonotic diseases encountered in a shelter situation. (c) Zoonotic disease scenarios presentation and discussion. (d) Post training knowledge assessment to assess short-term training efficacy. A formative evaluation of training materials will occur before training by shelter staff and volunteers not included in this study; CSU shelter medicine program personnel, other shelter medicine experts and my committee advisors. Summative evaluation will occur by follow-up survey 1-3 months after training to evaluate the long-term effectiveness of the training. The hypothesis is that infection control and zoonotic disease awareness knowledge will vary pre and post training; that it will also vary by factors such as urban vs. rural shelter location and shelter size.

Description of animal care procedures and of the effects on animals studied: No animals will be directly studied in this project.

Expectation of results: We expect training to have a positive affect on knowledge acquisition by animal shelter staff and volunteers on zoonotic disease awareness and infection control.

Method of analysis: Descriptive analysis will be performed on the results of the pre and post knowledge assessments. Efficacy of training will be evaluated using paired t-tests to compare mean scores pre and post training. Combined effects of shelter size, shelter location (urban vs. rural) and other factors on pre- and post-training scores will be evaluated using linear regression.

Estimated time to completion: Training, analysis, and description of results is expected to be completed by January 2009.