Disinfection and prevention of coccidia and giardia in shelter kittens

With limited options for effective disinfectants, managing coccidia and giardia in shelter settings requires attention to population management, housing, and proper mechanical cleaning and disinfection.

Question:

My wife and I manage the county animal shelter here in Texas. We house all types of critters to include pot belly pigs/goats/sheep/kittens/cats and dogs. Our primary focus is a TNR program for our community cat population estimated to be 1000-1500. We also rescue kittens that we can domesticate. This Spring we have rehomed 95 kittens to forever indoor homes. That being said we have a persistent coccidia and giardia problem. Virtually every kitten we bring into the shelter contracts both. Kittens that we foster in local homes do not have these issues. We use REScue™ as a disinfectant after a thorough deep clean. Is there anything that will eliminate coccidia and giardia other than steam cleaning? Your help will be appreciated.

Answer:

This is a good question and unfortunately not a simple one. Let’s start with coccidia and come back to giardia at the end. There are no disinfectants with a label claim for coccidia and steam cleaning has limited efficacy and feasibility. This means prevention should be the focus when managing coccidia in shelters.

Keeping within your organization’s capacity for care is of utmost importance when it comes to decreasing the number of cases of coccidia and giardia that your shelter sees. Coccidia is an opportunistic pathogen and both overcrowding and stress will play a very important role in infection. Therefore, reducing your length of stay -which will in turn help keep your population within your capacity- and increasing the quality of your housing will have just as much, if not a greater, effect on the incidence of disease as strong deworming and sanitation protocols.

We recommend administering prophylactic coccidial treatment on intake for kittens and puppies. Ponazuril (Marquis paste) is cost-effective and
can be started at 2-3 weeks old and repeated 7-14 days after initial treatment if the animal is still in the shelter. This will benefit both individuals and your population as a whole. If an animal develops clinical signs consistent with either parasite, a more aggressive deworming protocol should be done on an individual basis. Dilution instructions for Marquis Paste into a small-animal friendly concentration can be found here.

Using separate housing for litters of kittens and minimizing interaction between litters will decrease the transmission of oocysts. Foster homes are a great way to achieve this without impacting available space within the shelter. Fostering has the added bonus of decreasing stress which means kittens have a greater ability to fight infection. Anyone handling kittens should wear gloves and change gloves between litters. The number of people handling kittens should be minimized, while still ensuring they are receiving adequate enrichment and socialization.

When coccidia is present in an environment, deep cleaning is key to prevent both exposure and re-infection. Since oocysts are highly resistant to disinfection, a good mechanical cleaning is key. That means physically removing all organic material and wiping down the contaminated environment. Smoother surfaces will be easier to clean, rough surfaces can be sealed if necessary and carpet and fabric should be avoided or disposed of after a single use if it cannot be washed. Risk can be minimized by implementing disposable litter boxes that don’t require any cleaning. The time required for sporulation of oocysts (i.e. before they become infectious) in the environment is temperature dependent, and can be as little as 12 hours at 86° F. This means the more often feces can be removed, the less contamination there will be.

After mechanical removal a detergent and a disinfectant are needed. Accelerated hydrogen peroxide (e.g. Rescue™) is popular because it serves both functions. This saves time and money. Research has been done showing Rescue is effective against Clostridial spores which suggests it may be effective against coccidia oocysts, however there is no research looking directly at coccidia. A 1:16 dilution with a 5-minute contact time or 1:32 dilution with a 10-minute contact time is recommended for deep cleaning between animals.

Lastly, drying is an important step in cleaning for both coccidia and giardia. Kennels should be completely dry before animals are placed in them as oocysts thrive in humid environments. Allowing kennels to air dry is recommended if possible.

Giardia has a lower prevalence than coccidia and is typically seen less often. The coccidia management outlined above will largely address
giardia. Again, Rescue has no label claim for giardia and no direct research to support its efficacy. Quaternary ammoniums have shown efficacy, but are not recommended as sole disinfection agents as they have been shown to be ineffective against parvoviruses among others, despite label claims.

I hope this answers your questions, please let me know if you need any further assistance managing your current situation,

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