



SHELTER Watch

www.sheltermedicine.vet.cornell.edu

A quarterly newsletter brought to you by Maddie's® Shelter Medicine Program at Cornell.

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Program Coordinator

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FROM THE DIRECTOR'S DESK

We are excited to re-launch our program newsletter, Shelter Watch.

Our goal is to provide you with brief information on what is new in the field of shelter medicine, including relevant shelter research developments and updates on events and opportunities. Our first volume captures some of the best of the 2017 ASPCA Cornell Maddie's® Shelter Medicine Conference that was held on Cornell University's Ithaca campus this past summer. Over the course of the year, we will elaborate on new projects, studies, and seminars that can help you provide better health and welfare for the animals in your care.

We are also happy to announce our consultation hotline: if you are having an outbreak or urgent issue, please reach out by email at sheltermedicine@cornell.edu or by phone at 1(607)882-0179.



Maddie's
Fund

#ThanksToMaddie

New Shelter Medicine Fellowship!

The Maddie's® Shelter Medicine Program at Cornell is excited to announce its inaugural regional Shelter Medicine Fellowship. This Fellowship year is made possible by a grant from Maddie's Fund®.

We are happy to announce the four applicants who have been selected to participate in the inaugural year of our regional Shelter Medicine Fellowship here at Maddie's Shelter Medicine Program at Cornell University.

Congratulations to our 2017-2018 Shelter Medicine Fellows!

Our 2017-2018 Shelter Medicine Fellows include:

1. **Steve Gentilella, DVM**

Director of Animal & Medical Services
New Hampshire SPCA (Stratham, NH)

2. **Monica Shepherd, DVM, PhD**

Medical Director
Pet Rescue (Harrison, NY)

3. **Shian Simms, DVM**

Vice President of Veterinary Medicine
Bideawee (Manhattan, Wantagh, and Westhampton)

4. **Marina Tejada, DVM**

Supervising Veterinarian, Medical Services
North Shore Animal League America (Port Washington, NY)

To learn more about the fellowship learning objectives, requirements, and how to apply, please go to our [website](#).

Although the number thirteen is considered unlucky by numerical standards, this the 13th year of the Maddie's Shelter Medicine Program at Cornell and we considerate ourselves fortunate at this point in program and our consultative work. Thank you all for being a part of it.

Thank you,

Elizabeth Berliner, DVM/
DABVP

Director of Maddie's®
Shelter Medicine Program
at Cornell



From left to right: Marina Tejada, DVM (Shelter Medicine Fellow); Erin Henry, DVM (Shelter Medicine Instructor); Shian Simms, DVM (Shelter Medicine Fellow); Elizabeth Berliner, DVM, DABVP (Director of Shelter Medicine); Monica Shepherd, DVM, PhD (Shelter Medicine Fellow); Steve Gentilella, DVM (Shelter Medicine Fellow).

Out of the Journals: Updates in Shelter Medicine Research

COLUMN by Lena DeTar, DVM, DACVPM,
Assistant Clinical Professor

Aug 21, 2017

Welcome to the first installment of this recurring column, in which I will highlight newly published research articles (hopefully) relevant to your shelter practice. I'll discuss the results of the research papers, the methods used to come up with those results, and any critiques or problems with the methodology.

This week, I'm reading:

Diagnosis and Treatment of Dermatophytosis in Dogs and Cats. Clinical Consensus Guidelines of the World Association for Veterinary Dermatology. KA Moriello, K Coyner, S Patterson, B Mignon, Veterinary Dermatology 28: 266-e68, June 2017. DOI: 10.1111/vde.12440

Clinical Consensus Guidelines (CCGs) are similar to review articles in that they critically examine other published research articles and summarize scientific facts based on the body of current evidence. Review and meta-analysis articles spend a significant amount of time explaining their methodology and reasoning behind the articles they choose to rank and highlight; CCGs spend more time summarizing relevant clinical findings with an eye toward practical patient-care recommendations.

In this 30-page article with over 325 citations, the authors present an overview of basically all the literature ever published about domestic animal ringworm infections, including reclassifications of fungi, prevalence and risk factors, ringworm pathogenesis, and varied clinical signs. Diagnostic testing is discussed at length, including Wood's lamp exam, direct hair exams, fungal cultures, PCRs and biopsies. The discussion of topical and systemic treatments includes tables provided in supporting information. The last section of the CCG is devoted to environmental disinfection and zoonotic considerations, a huge issue for shelters.

One criticism I have of this CCG is that scientific rigor of the cited journal articles is rarely weighted; only occasionally do the authors caution that the methods used in a study are less than ideal. In some areas, the authors fail to provide guidance when multiple options are available (eg, itraconazole dosing schedule.) However, this consensus represents a massive undertaking on the part of the dermatologist authors. I especially commend their focus on shelter animals in this project, and most specifically in mentioning welfare concerns.... (cont. on page 5)

SHELTER Watch

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Nickerson, Editor in Chief, at
SN298@cornell.edu.

Outbreak!!!

by Erin Henry, DVM, Shelter Medicine Instructor

At this year's 2017 ASPCA Cornell Maddie's® Shelter Medicine Conference our very own Dr. Lena DeTar gave a lecture on outbreak management in the LVT track. She first spoke about the definition of an outbreak, the characteristics of diseases having the potential to cause an outbreak, and the steps that should be taken to manage an outbreak

This talk was followed by a small-group roundtable exercise. I was lucky enough to have the opportunity to facilitate one of the groups. Participants were broken into 6 groups,. Each group worked through four outbreak cases- feline panleukopenia, canine distemper, ringworm, and rabies. The groups consisted of LVTs, veterinarians, and staff from differing organizations with widely varying experiences.

Each case played out much like a board game. Attendees rolled dice to determine the number of disease cases or exposures. We then determine d the best steps to take to mitigate disease spread based upon what they knew about the disease in question. We discussed isolation of affected animals vs. quarantine of those exposed, how to define exposure, the importance of vaccinating with a modified live vaccine, cleaning and disinfection with products that are effective against the pathogen in question, pathway planning, and more!

This game gave the attendees the opportunity to immediately put the process that Dr. DeTar discussed into practice and allowed them to practice the thought process and decision-making required during an outbreak. Attendees were very engaged and enjoyed working through each of the cases. Well done, Dr. DeTar!

Announcing expansion diagnostic service, Maddie's® Shelter Lab

We are excited to announce that we are expanding Maddie's® Shelter Lab, our subsidized diagnostic service for animal shelters, to serve the entire East Coast. Maddie's® Shelter Lab now provides shelters and rescues in the following states with 50% off diagnostic testing and supplies using free shipping labels via UPS Ground:

- New York
- Illinois
- Indiana
- Ohio
- Pennsylvania
- West Virginia
- Virginia
- North Carolina
- South Carolina
- Georgia
- Florida
- Maryland
- Delaware
- New Jersey
- Connecticut
- Rhode Island
- Massachusetts
- Vermont
- New Hampshire
- Maine

To find our more details and how to register, please go to our website at

www.sheltermedicine.vet.cornell.edu

Engaged
Cornell

We are excited to announce that we are organizing a regional Responding to Animals in Disasters Workshop that will be offered to shelter staff and CU veterinary students in Spring 2018. Details coming soon.

An Engaged Opportunity Grant from the Office of Engagement Initiatives funded this community-engaged project.

(cont. from page 3, *Out of the Journals*) ...

Here are some highlights for the busy shelter practitioner:

1. Classification of fungi is still evolving. Both *Trichophyton mentagrophytes* and *Microsporum gypsum*, for example, are actually group classifications that include more than three distinct fungi species.
2. *M. canis* infections are primarily transmitted directly cat to cat. *M. gypseum* infections often come from contact with contaminated soil, while *Trichophyton* spp infections often come from contact with infected rodents and rodent nests.
3. *M. canis* lesions are asymmetrical, minimally pruritic, and occur primarily on the face, ears, and muzzle (they may progress from there to the rest of the body).
4. Wood's lamp exams:
 - a. Fluorescence of *M. canis* infected hair is created by a fungal metabolite (pteridine) within the cortex or medulla of the hair. Therefore, only infected hair will glow. Lifting crusts to reveal hair shafts below can facilitate examination. And, pteridine pigment within the hair tips can remain detectable long after hair shafts are culture negative.
 - b. When data were pooled from 57 studies describing examination of animals with ringworm, 72% of dermatophyte positive animals were positive on Wood's lamp exam. (This is different than the 30-50% number cited in four laboratory studies from the 1950s and 60s.)
5. Fungal culture:
 - a. Fungal culture detects the presence of fungal spores on the hair coat sampled. False positives and false negatives occur. Toothbrush techniques are considered superior to plucking for detection of dermatophytosis in animals.

b. There is no data to support fungal cultures growing better in the dark, or that incubation at 37°C enhances fungal growth.

c. Reporting of colony forming units (cfus) is recommended instead of just positive or negative on culture plates, since cfus correspond to success (or failure) of treatment.

6. PCR (new!):

a. Positive PCR tests can be the result of active infection, spores carried on fur, or nonviable fungal organisms still present after successful treatment. Therefore, repeated PCR may not be ideal for tracking success of treating dermatophytosis.

b. Negative PCR tests can be the result of no infection present, poor or unlucky sampling, clinical cure, or if DNA from the dermatophyte species is not in the PCR primer package.

7. Treatment:

a. Several studies document the effectiveness of lime sulfur treatment, with 8oz/gal and 2 times weekly showing faster cures. Oral ulceration has not been documented in any shelter studies at these concentrations.

b. Miconazole/chlorhexidine shampoo applied for >10 minutes 2 times weekly may be an acceptable alternative to lime sulfur in situations where short time to cure is less important.

c. Fluconazole has poor antifungal efficacy against dermatophytes. Ketoconazole is less effective than itraconazole, and has higher potential for side effects.

d. Itraconazole, properly formulated, is effective and safe. Multiple treatment schedules exist, but so... (cont. on page 8)

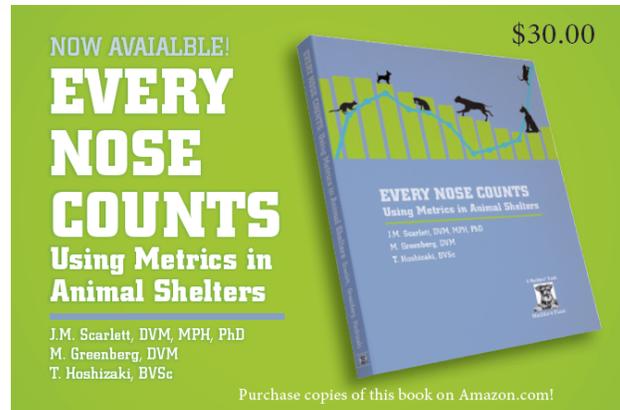
Central NY Shelter Forum Update

by Vicki Weber, LVT

CNY Shelter Forum was formed approximately 4 years ago by Cornell's Maddie's® Shelter Medicine Program Director, Elizabeth Berliner, DVM, DABVP, with the intention of bringing local and regional shelters and rescues together to discuss shelter and veterinary medicine with the goal to not only educate attendees in new and updated sheltering and rescue practices, but also to build camaraderie and encourage collaborations amongst individuals and organizations.

The CNY Shelter Forum's meetings are hosted by the Maddie's® Shelter Medicine Program at Cornell University, and organized by the program's veterinary technician, Vicki Weber, LVT. Forum meetings are normally held the first Thursday of each month, beginning at 5:30pm with light refreshments. Speaker presentations begin around 5:45pm at the Animal Health Diagnostic Center at Cornell University in Conference Room 1 (first floor). Presentations are 30 minutes long and are followed by question and answer time and round table discussion. Everyone from members of management to doctors, technicians to care staff and volunteers are welcome and encouraged to attend and participate in Shelter Forum. Everyone brings value to the group.

The group has grown over the last few years from a handful of people to over 20 regular attendees representing shelters and rescues from as far as an hour away. This year, Fall 2017 and Spring 2018, we will also be looking at adding an option for video access to the meetings in order to reach more groups and individuals who are unable to attend. Winter break will be Jan.- Feb. as travel in the Northeast can be particularly difficult. Spring 2018 Shelter Forum meetings will begin in March and run through June.



*"For years, animal shelters have been hearing a similar message, "You need to use your data!" But which pieces of data should be monitored? How often? And to what degree of detail? **Every Nose Counts: Using Metrics in Animal Shelters** is a guide book that seeks to answer these questions, and many more."*

Our very own Program Founder, Dr. Janet Scarlett, has co-authored a book specifically focused on helping animal shelters utilize their data. A description of the book can be found below. To

Thursday, December 7th: The evening's forum will be led by Dr. Erin Henry. We will be playing Dr. DeTar's "OUTBREAK" board game. For those that attended her lecture at the Maddie's Shelter Medicine Conference, you may remember it.

December's forum will be the last for this winter. We will resume again on Thursday, March 1st, 2018.

WINTER BREAK: January and February 2018. See ya'll March 1st!

SPRING 2018: Details for upcoming forum dates and topics coming soon. See our [website](#) for more information.

Cheers!

Addressing Behavioral Concerns in the Shelter

by Megan Stapleton, DVM

Attending the 2017 ASPCA Cornell Maddie's® Shelter Medicine Conference last month was one of the highlights of my new internship thus far. I was especially looking forward to hearing Dr. Sara Bennett speak about the use of psychopharmaceuticals in a shelter environment. Behavior cases are often challenging and can take a significant amount of time and resources to rectify, which can be difficult to achieve in a shelter setting without the proper protocols in place.

The first step to managing a behavioral problem is being able to recognize it. This includes obtaining a detailed history from whomever is surrendering, or found, the pet, as well as detailed, objective reports from any person within the shelter who has interacted with the pet. Any immediate welfare concerns should be addressed promptly in order to maintain a good quality of life for the pet. A thorough physical exam should always be performed in order to rule out a medical cause for behavioral issues. Medications (such as Trazodone, Gabapentin, or Clonidine) to address unwanted behaviors can be utilized on a short-term basis in order to promote adoptability and allow for a smoother transition into a home setting. More serious behavior disorders can be exacerbated in a shelter setting, and cases like these may require long-term medications (such as Fluoxetine, or Sertraline) in addition to behavior modification training before the pet can be placed into a home. In any scenario, one has to consider treatment goals, risk assessment and the quality of life for the pet when choosing a treatment plan. Having an understanding of what your community deems acceptable in terms of managing behavior cases is also important, and having a network of shelters that

can facilitate the transfer of challenging adoption cases can be extremely beneficial. Regardless of which route is chosen to address behavioral problems, having a detailed plan for monitoring, follow-up, and post-outcome management is critical.

Resources:

1. Dr. Sara L. Bennett, DVM, MS, DACVB
www.DrBennettBehavior.com
2. American College of Veterinary Behaviorists
www.dacvb.org
3. American Veterinary Society of Animal Behavior
www.avsonline.org

Save the date!

August 10-12, 2018

2018 ASPCA Cornell Maddie's® Shelter
Medicine Conference

We will be offering exciting new opportunities for further shelter and veterinary medicine training in 2018. Please visit our website and follow us on Facebook for updates.

March 23 & 24, 2018

Veterinary to Leader Seminar
(led by Emancipet New School)

Date TBD

Responding to Animals in Disasters
Workshop
(in collaboration with representatives
from the ASPCA FIR Team)

(cont. from pg. 5, *Out of the Journals*)...

far, studies haven't shown important differences between them.

e. Terbinafine has the lowest MIC for *Microsporum* and *Trichophyton* spp, and at least three studies have shown that high concentration levels are achieved in cat hair. Terbinafine has no known teratogenic potential.

f. Multiple studies failed to show that either lufenuron or fungal vaccines are effective in protecting against dermatophytosis.

8. Good environmental disinfection can prevent reinfection, prevent spread of infection, and prevent false positives on culture.

a. Accelerated hydrogen peroxide (Rescue®) is a newer broad spectrum disinfectant that has good activity against dermatophyte spores.

b. At a 2% solution, potassium peroxymonosulfate (Trifectant®) was recently found to be effective against dermatophyte spores.

c. Contact time for all disinfectants was critically important in clearing the environment of fungal contamination.

9. Adding hypochlorite (bleach) to laundry was not helpful in decontaminating laundry; merely washing the contaminated material twice and drying thoroughly was enough to kill all spores. Cleaning the machine surfaces with a disinfectant (see above) afterward is also recommended.

10. Socialization and animal welfare should always be considered when deciding to isolate, confine, and treat ringworm animals.

Happy dipping!

First Steps for Diagnosing Heart Disease in Shelters

by Meagan Wentworth, DVM,
Janet Swanson Intern of Shelter Medicine

When I am faced with a patient at the shelter that has cardiac disease, diagnosis and prognostication can be daunting. Should I try to get an ECG? Do I need to get this animal in to see a cardiology specialist and have an echocardiogram done?

Dr. Darcy, Clinical Assistant, North Carolina State, urged clinicians at the 2017 ASPCA Cornell Maddie's Shelter Medicine Conference held last month on Cornell University's Ithaca campus to slow down and take a step back. Two tools can be utilized at every shelter, no matter the budget, to narrow down the differential list and assist in deciding whether more advanced diagnostics are warranted.

First, look at the patient in front of you and - gasp! - profile them based on species, breed, and age group. Common diseases are common! While profiling is generally discouraged in human medicine, it can yield valuable information when looking at our animal patients and guide our differential list. Next, a thorough physical exam can tell you heaps about the cardiac disease in your patient. Assess the animal's general mentation, femoral and jugular pulse quality, and mucous membrane color. The abdomen should be palpated for presence of free fluid or masses. Do not forget to auscultate; auscultate heart rate and rhythm, auscultate murmur grade and location, and auscultate respiratory rate and lung sounds.

Together, your patient profile and physical exam findings can allow you to narrow down your differential list and determine whether more advanced testing is necessary.



Thank you,

Maddie's® Shelter Medicine Program at Cornell

(From left to right: Megan Stapleton, DVM (2017 Shelter Medicine Intern); Erin Henry, DVM (Shelter Medicine Instructor); Elizabeth Berliner, DVM, DABVP (Director of Shelter Medicine); Vicki Weber, LVT (Shelter Medicine LVT); Lena DeTar, DVM, DACPVM (Assistant Clinical Professor); Janet M. Scarlett, DVM, MPH, PhD (Professor Emerita of Epidemiology/ Shelter Medicine Program Founder); Sarah Nickerson (Program Coordinator); Brenda Payne (Administrative Assistant); and Meagan Wentworth, DVM (2017 Shelter Medicine Intern))



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Contact us

Ph: 1 (607) 253-3857

Email: sheltermedicine@cornell.edu

Editor: sn298@cornell.edu

website: sheltermedicine.vet.cornell.edu