

Recognizing Shelter Diseases and Minimizing Transmission

Martha Smith, DVM

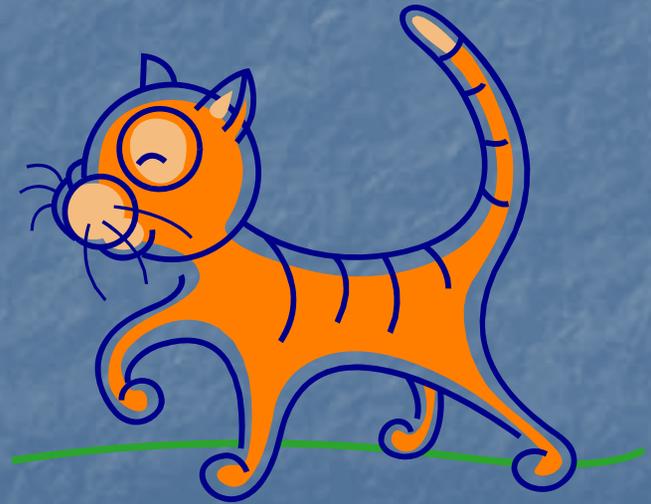
Presented to the Massachusetts Animal
Coalition

9/16/07

**ANIMAL
RESCUE
LEAGUE**
of BOSTON



Helping animals since 1899.



Shelters are like preschools



- Diverse population
- Varied health status
- Stressed immune systems
- Pooling of infectious organisms
- And they will put **ANYTHING** in their mouths!

What does a sick animal look like?

- Dull (eyes, attitude)
- Lethargic (sleeps too much, difficult to rouse)
- Poor coat/ungroomed
- Skinny
- Vomiting, diarrhea, anorexia, hovering over water bowl
- Fever or low body temperature (over 102.5 or under 99)



What does a healthy animal look like?

- Bright, shiny eyes
- Full haircoat
- Interactive attitude
- Good appetite/water intake
- Well formed stools



What does an infectious animal look like?

- Like any other animal!
- Immune but shedding
- “Prepatent period”
 - Looks and feels well, but shedding virus



What does this mean for us?

- We have to be *involved*
- Really  at the animals in our care
- Point out suspicions or irregularities
- Track appetites, activity, vomiting or diarrhea
- Take temperatures
- Learn and remember how the diseases work
- Call for help!

Sanitation and Disease Control are Ongoing Challenges

- New influx of animals, new challenges
- Varied backgrounds, immune status
- New staff, new volunteers, new challenges
- Vigilance is key!



Each Shelter has it's own Environment

- There is no one size fits all protocol
- Depends on philosophy, mandates, resources
- Regardless: disease transmission can be greatly reduced
 - with proper cleaning and disinfection protocols
 - appropriate animal handling
 - good preventive medicine
 - consistent staff training
 - effective stress reduction techniques for the animal (and human!) residents.

Facility vs Faculty!

- The most modern and well designed shelter with an untrained or uncaring staff will be a sicker and less humane house than an aging building with a staff that understands disease transmission and its relationship to cleanliness and that works hard to maintain appropriately high standards.



Responsible Sheltering is Healthful Sheltering

- Poor sanitation, insufficient disease control programs lead to unnecessary suffering
- Prevention of disease transmission costs less than response to an outbreak
- Liability of zoonotics
- Reputation of the shelter

Foot Traffic and Animal Movement

- Fomites
 - Shoe, towels, hand, litter pan, toys, dishes, clothing, hair, mops, cleaning carts
- Clean from healthy to quarantine to isolation
- Foot baths, gloves, hand sanitizer, gowns

Kennel Design and Surfaces

- Ideally, non-porous and scratch proof
- Wood, jute, carpet & PLASTIC can never be adequately disinfected
- HEPA filters to reduce hair & dust
- Fly & rodent control
- A healthy shelter has a neutral odor

Sanitation: Cleaning and Disinfection

- A three step process:
 - Dry cleaning, or tidying
 - Removal of litter, hair, dust, feces (ideally, removal of the animal)
 - Wet cleaning – the scrub!
 - With detergent/degreaser to break down biofilm
 - Disinfection
 - Bleach, quaternary ammonium or oxidizing agents

The Ideal Disinfectant

- The ideal disinfectant is inexpensive, broad spectrum, non-toxic, non-irritating, non-corrosive, harmless to the environment and works at any temperature, pH and water hardness.
- The ideal disinfectant also works in the presence of organic material and has a residual effect.
- The ideal disinfectant does not exist!

Choosing the right disinfectant

- Depends on your disease challenges
- Parvo/panleuk the best choice is BLEACH, household bleach at 1:32 or 1 cup in a gallon of water
- Must be made fresh each day
- Ringworm spores need 1:10 dilution of bleach
- Never use phenols in an animal environment
- Biguanides (Chlorhexidine, Nolvalsan) are effective against bacteria only

The BIG ones

- Panleukopenia
- Parvovirus
- Calicivirus
- Herpes virus
- Bordatella
- Ringworm
- Canine Distemper
- Canine Influenza
- Rabies -WOUO



Panleukopenia

- Attacks rapidly dividing cells
 - Lining of the intestines
 - Bone Marrow
- Kills by suppressing the immune system & allowing sepsis
- VERY preventable
 - Vaccinate the day before exposure – 99% survive
 - Vaccinate the day of exposure – 50% survive
 - Vaccinate two hours after exposure – 1 – 2% survive

Panleukopenia

- First signs
 - Vomiting
 - Diarrhea
 - Hypersalivation
 - Head hanging over water bowl
 - Dead kitten
 - High fever/lethargy

Panleukopenia

- Prevention
 - Vaccinate, vaccinate, vaccinate
 - Test with Parvo snap test any suspect cases
 - Use bleach when there have been any cases
 - Remember, you WILL have healthy shedders in your population
 - We can't keep it out of the shelter, but we SHOULD be able to prevent spread in the shelter
 - Did I mention vaccinate?

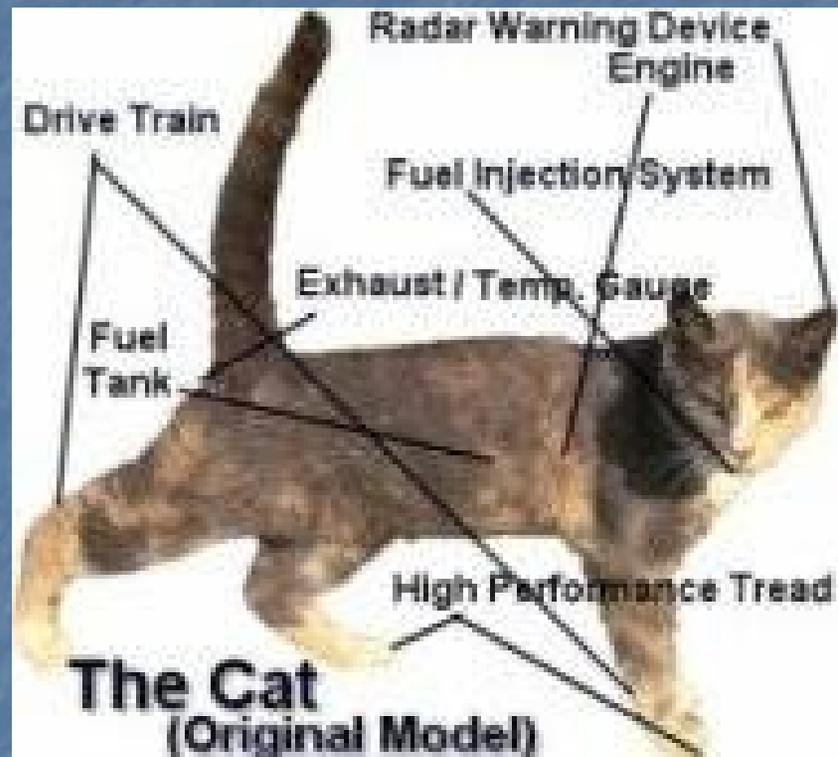
Parvovirus

- Just like Panleukopenia in cats, but in dogs
- We don't see it as often because we don't see puppies as often
- Quiet puppy
- Vomiting/diarrhea
- Recovered animals shed virus for 30 days

Calicivirus



- Upper respiratory virus of cats, sneezing
- Ulcers on tongue, nose
- High fever, drooling, holding mouth open
- Sudden death in kittens
- Lameness in kittens
- Recovered cats can shed virus for months, years or life



Herpes virus



- Upper respiratory virus of cats, sneezing
- More ocular than calici virus
- Weepy, puffy eyes, puss like discharge
- High fever, lethargy
- Recovered cats can shed virus for life and will relapse in times of stress
- Is the shelter stressful?

Bordatella



- Generally known as the causative agent of “kennel cough” in dogs
- Can be caught by cats, especially cats with other viral upper respiratory diseases
- Honking cough
- Will cause a lethal pneumonia when combined with other viruses or bacteria
- Report all coughing cats

Calici, herpes and bordatella

(oh, my!)

- Each one on its own may produce mild disease
- Each pair (or trio, heaven forbid!) of mild diseases in one cat may combine to cause leathal disease
- Good reason not to combine litters
- Good reason to use the intranasal vaccine, even in the face of symptoms



Ringworm



- Any bald spot in a cat must be considered suspect
- Any crusty lesion on a cat must be considered suspect
- An old veterinary dermatologist I know said that Ringworm can look like anything it wants to in a cat
- Doesn't kill (well, it can...) but a BIG one because of contamination issues

Canine Distemper



- Easy to confuse with Kennel Cough
- Difficult to diagnose
- Prevention is key – early vaccination!
- Aerosol transmission/short distance fomites
- Respiratory, GI, immune, skin, neuro

Canine Influenza



- Dogs are at their most infectious prior to showing signs of disease
- Up to 100% of a population will be infected
- 20% will have no illness
- Fever, cough, nasal discharge
- One week in 10 – 20% of dogs will develop high fevers/pneumonia
- Widespread, older, well vaccinated dogs affected? Think flu

The little ones

(They can kill too...)

- Stress colitis
- Coccidia
- Helminths
- Scabies/demodex
- Fleas/ticks
- Giardia
- Heartworm



Stress colitis

- Mucousy diarrhea, sometimes streaked with blood
- 1 to 3 days after arriving at the shelter
- Negative fecal
- Dog feels well, no fever, not lactating
- First day, treat with high fiber diet (R/D), pumpkin
- Second day, seek veterinary care

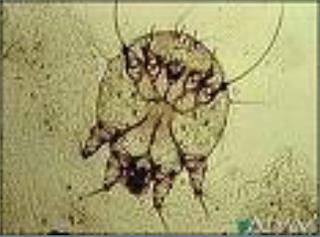
Coccidia



- Rarely causes illness in adults
- Problem for kittens and puppies
- Treat for coccidia (Ponazuril) in any kitten/puppy that has diarrhea, feels well and no findings on fecal floatation

Helminths (Worms)

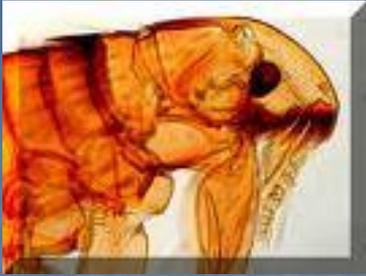
- Causes of diarrhea, loss of appetite, or a general 'unthrifty' appearance
- Consider treating mucousy diarrhea in dogs with panacur
- Can kill the very young by compromising the nutritional status, causing anemia or blocking the intestines
- Routine deworming of everyone
- Fecal floatation testing of all diarrheas



Scabies/Demodex



- Scaly, itchy skin disease caused by mites
- Dogs usually
- Scabies (elbows, ears) is very transmissible
- Demodectic mange (around the eyes) is the flag of a compromised immune system
- Severe cases can kill by breaking down the skin and causing infection



Fleas and Ticks



- **Fleas kill!** Anemia, typhus, bartonella, plague
- **Ticks kill!** Ehrlichia, lyme, babesia, RMSF, tularemia
- Treat all cases of fleas and ticks
- Fleas carry tapes
- People can get tapes
- Treat all flea infested animals with Droncit/drontal

Vaccines to Use in Cats

- Cats: CORE Vaccines
 - Modified Live Panleukopenia
 - Intranasal Calici/rhinotracheitis
 - Rabies
- Vaccines to Consider or Avoid
 - FIP, FIV, VS-FCV, chlamydophila felis, bordatella, corona, giardia, FeLV

Vaccines to Use in Dogs

- Dogs: CORE Vaccines
 - Distemper (CDV)
 - Adenovirus-2 (CAV-2/hepatitis)
 - Parvovirus (CPV)
 - Parainfluenza (CPIV)
 - *Bordetella bronchiseptica*
 - Rabies
- Vaccines to Consider or Avoid
 - Corona
 - Giardia
 - Lyme
 - Leptospirosis

Vaccine Considerations

- Vaccine handling
- MLV concerns
- Maternal antibody interference
- What is recommended in the shelter world is not what is recommended in the other world (individual pet practice)
- Work with your veterinarian

Did I go too fast?



Questions?

