Evidence, Epidemiology and Companion Animal Practice: How fun is that?

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Purpose

- Think about where information, data, statistics come from
- Examples of odd things that still relate to clinical practice
- Evidence-based medicine...
  - Epidemiology is the underpinning
- No relative risks or p-values!

Topics

- How I got interested
- Osteochondritis dissecans in dogs
- Avian influenza
- Arthritis in cats
- Hurricanes
- Companion animal population medicine
My Interest

- Eyes in vet school
  - Occurrence of glaucoma in second eye
  - Did as a student research project
- Options for treatment with limited funds in practice
  - Parvo, femoral fractures in kittens
- Questions about prognosis
  - Bilateral fho, kidney stones, glaucoma
Risk Factors for OCD in Dogs

- Joint disease of young growing dogs
- Clinical impression that premium foods increased risk of disease
- Designed a matched case-control study to evaluate diet and exercise as potential risk factors
- Created a diet and exercise questionnaire for dog owners about usual diet

Diet Assessment

- Similar to our ability to remember our own diets!
- Regularly fed, routine foods good
- Occasional, treats bad
- Some things embarrassed to admit
- Bad on portion size
- So be cautious about data on feeding
  - How question is asked is crucial
- Studies on diet need to be carefully done
Avian Influenza

- How does this relate to companion animal practice in the US?

- Have your friends and relatives already asked you about this?
Avian Influenza

- Some strains already common in US
- H5N1 is the one all are worried about
  - Potential zoonosis so will get questions
- Can be transmitted to cats who eat ill or dead infected birds
- Probably dogs too
- Rare spread between cats
- Where do you find data?

Avian Influenza

- In Europe cats are being abandoned!
- Need to provide guidance to prevent
  - Keep indoors, feed commercial food
- Need to know how about spread and risks
- Ongoing monitoring of AI in US for more pathogenic versions
- Need to talk to pet bird owners too!
Arthritis in Cats

- How many of you have older cats?
- Do you know if they have arthritis?
- What would we do if they did?

- Pure epidemiology! 😊
Questions...

☐ So how common is this disease?
☐ What ages are most commonly affected?
☐ What are the causes?
☐ How do we diagnose/assess it?
☐ How do we treat it?

☐ We are working on 1, 2, and 4

Project

☐ Find cats of all ages
☐ Orthopedic examination
☐ Take radiographs of all joints
☐ Ask owners about cat activity, pain
  ■ How do we do this?
Arthritis in Cats

- Quality of life assessment by owner
  - 5 areas/activities that are important
    - Score, weight and add for global measure
- Validating an approach used in human medicine to apply to pets
- Has been used for caretakers of ill humans
- Also questions about usual activities
- May help id as part of history
Hurricanes

☐ Any of you involved in Katrina/Rita?
☐ I know animals came as far as CA
☐ So how might veterinarians in private practice be involved in disasters?
☐ Where would you find information on disasters and companion animals?

Disasters

☐ On site care for animals
  ■ Guidelines from AVMA
  ■ Data sheets from UCDavis Shelter Medicine Program, also research
  ■ Triage
  ■ History
  ■ Identification
  ■ Handling and record keeping
  ■ As well as actual health care
Disasters...

- Shelter veterinarian for animals
  - Common health problems
  - Dehydration, starvation, skin, infection
  - Zoonoses and behavioral issues
  - Reunite with owners

- Private practice for newly adopted relocated animals
  - Need to be aware of issues, health

Disasters and Veterinary Medicine

- Evacuation of animals as part of local plans—veterinarians involved
- We’ve known for decades this is an issues
- Obvious in the media coverage of the hurricanes
- Legislation currently in the works to require some plan for animals in government plans
Population Medicine

- So when might a companion animal practitioner be dealing with “herds” of small animals?
Small Animal “Herds”

- Multiple pet households
- Foster homes
- Breeders
- Animal shelters/rescue organizations
- Boarding facilities
- Their own clinic!

Special Concerns

- Cost issues
- Purpose of group of animals
- Disease transmission
- Disease control in groups
- Sanitation
- Interplay of stress, nutrition, housing, immune response, etc.
  - Need to take a global, ecological view
A Unique “Herd”: Feral Cats

- 2/3 of veterinarians in private practice saw ferals in TN and TX
- What should you do?
- How do you feel about dealing with feral cats?
- Local organizations and government will likely get you involved!
Definitions

- Free-roaming cats
  - Any cat not confined to an owner’s property
  - Indoor/outdoor cats
  - Stray (lost) or abandoned cats
  - Feral cats (unsocialized)

- Different groups need different solutions

- What are your experiences?

Veterinarians and Feral Cats

- As practitioners you will be involved
  - In prevention
    - Responsible pet ownership
    - Keeping pets in homes
  - In control
    - Pros and cons of different options
    - Numbers and types of options
    - Practicality and variability in different spots
  - Numbers of birds/prey killed arguments
Guidelines for Cat Groups

- What services to offer?
- FeLV, FIV testing policy?
- What sort of follow-up is needed?
- What is the financial structure (standard discounts, special pricing)?
- How many cats can be seen?
- What are the practice logistics for scheduling and handling cats?

What Do We Know about TNR?

- Check the literature (books and journals)
- Check the web
- Talk to the group and visit colonies and foster homes
- Check CE opportunities
- Find your comfort level (and your boss’?)
Conclusions

- Epidemiology tells us about frequency, diagnosis, treatment and prognosis of diseases
- Need to be able to evaluate how good the data are based on epidemiologic knowledge
- Need to know where to find data
Conclusions

- Epidemiology is important for herd health of any herd
  - There are many different types of "herds"
- Evaluation of data will help with controversial subjects
- Companion animal veterinarians get pulled into the most unlikely situations!