

**EPID-600 Introduction to Public Health
Rabies & Zoonoses of Public Health Interest & Animal Control,**

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Objectives

After this seminar students should be able to describe

- **The hazards of rabies**
- **The community programs and surveillance systems used to prevent spread of Rabies.**
- **Other Zoonoses which cause ill health in the community**
- **Zoonoses which are a risk for causing bio-terror incidents,**
- **Dangers from vicious animals.**
- **The community hazards of uncontrolled animal populations including pets and wild life.**
- **Why protecting animal health enhances community health.**
- **Competencies: 1A(3,7,9), 1C(1,2,3,8), 1E(1,6), II1(1-7)**

Concept:

Animals can be dangerous to the health of humans. Epidemiologic investigation of hosts and vectors lead to the control of diseases spread by animals, and can provide early warning on bio-terror attacks.

Key Words:

Pets, Wild Animals, Hosts, Vectors, Rabies distribution in animals, Lyme Disease, West Nile Virus, Other epizootics, Vaccinations, Bite investigations, Animal Control, Veterinary public health.

References

**CMG Buttery - [Essay No. 8](#) Vector & Animal Control,
Schneider, Introduction to PH, 2nd Edn. pp142-149; 176-178
The Ecology of Stray Dogs, Beck, A. York Press 1973 [still the gold standard for understanding feral animals.]**

Updated URLS

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Look at Dr. Murphy's PowerPoint shows (1) [Zoonoses, Handouts](#) (2) [Rabies, Handouts](#). Click on [VDH Web](#) and examine the Rabies Information. Also look at the CDC [Update on Rabies Zoonoses](#). Then, return to the epidemiology home page and select the Fact sheets and examine the fact sheets on Lyme Disease and Tick-borne diseases. Look at the [USGS West Nile Virus Map](#) for various species infections, then look at the bird map and click on Virginia to determine how widespread the WNV is in birds in 2005. Look at this report on [control of Avian Flu](#) in Vietnam. Also, scan the latest [Compendium of Animal Rabies](#) Prevention and Control, **2008**

Bioterror Resources

[JHU Center for Civilian Biodefense Studies](#)
[National Academies Reports on Terrorism and Security](#)
[kaisernetwork.org/healthcast](#)

Using the internet see what you can find about human rabies in the US in the last 5 years. What is the main vector.

Review Dr. Buttery's [PowerPoint](#) slide show ([PDF Version of Animal Control](#)) then visit the following set of links to examine the issues of animal control as a public health and community health issue as you go review the attached information? You will find the answers to the question posed below at these web sites. Also determine what the various sites have in common.

Department of Agriculture, [Dangerous Dog Registry](#)
[Fairfax County Animal Control](#)
[City of Seattle Animal Control](#) (what do both these two sites have in common?)
[Humane Society of the United States](#) (focus on pet care)
[Animal Shelter Information](#)
[Animal Control Officer Training/Standards](#) (what can you find about training standards?)

The controlling law is found in the Virginia Code, in the Title devoted to the Dept. of Agriculture, Division of Animal Health. The director is a public health trained veterinarian. He is responsible for all domestic animals, most of which are found on farms.

Using the Web examine the home pages of the Fairfax County Animal Control and the Animal Control Department of the City of Seattle, Animal Control agencies to view the services they provide and their philosophies of operation.

What are [Feral cats](#). What should we do about them? [AVMA statement](#) on Feral Cats

Wild animals are the responsibility of the [Department of Game and Wildlife](#).

Changes to animal control state law starts in the Committees on Agriculture of the State House or Senate. Can you find out what changes have been made to animal control ordinances in the last 2 years and why?

A serious hazard from domestic animals is Rabies. It can be passed on to herds of cows, sheep etc. With development of cities and depredation by loose (feral) animals, animal bites are now as much a problem as dog/cat-to-human transfer of rabies. Current law requires immunization of domestic animals against rabies. More recently leash laws, standards for kennels, and licensing requirements have developed. Under the state system, localities can only enact local laws when permitted by state law, which limits the amount a locality can charge for licenses. Because of antisocial behavior by many individuals, new laws protect animals from people, not just people from animals. These include codes on care, feeding, housing, and abuse of animals, including prohibitions against animal fighting.

In addition to rabies a wide array of potential pathogens are both carried and transmitted by animals, including Lyme Disease and Psittacosis.

Several cities, including Richmond, have been concerned about the increase in rabies among cats, the move into the cities by raccoons and the presence of large numbers of unrestrained dogs. The desire was to control wandering of all loose domestic animals as well as pay for control of the animals. City staff worked closely with the humane society to get enabling legislation passed.

Should the public at large should pay for animal control by use of user fees (taxes) on animal owners or from the general tax base?

In Richmond, the division of animal control has moved periodically between the police and health departments. In Texas most animal control resided in either local health departments or was contracted to humane societies.

Consider the advantages and disadvantages of where the program lies and how you can encourage community support.

How can epidemiology be used to garner support for improved animal control?

Enforcing animal control laws in the courts is extremely difficult. We have the same problems, in the courts, prosecuting animal control violations that we have with restaurants or septic tanks regulations. If we have to go to court we have been unable to change someone's behavior.

Animals running loose often form packs and attack and bite people.

They also defecate and urinate on public and private property and damage property.
Some breeds are more of a problem than others.
Animal rights groups and the ACLU often prevent protection of the public.

The US Humane society, and its state & local branches, work hard to ensure a fair balance between the privilege of owning an animal versus protection of the public and the animals.

Review CDC advice on preventing [Animal Bites](#). Also the CDC report of nonfatal [dog bites in 2001](#) (note the problem that many federal reports get old quickly. There has been no update on this issue since report was published in 2003.)

Consider the Following Questions:

Which animals in Virginia now present a significant likelihood of transmitting rabies?
What can the community do to protect itself from out of control animals?
What can individuals do?
How could you reduce animal bites? See CDC web page on [dog bite prevention](#)
Who is most likely to be attacked?
Are there circumstances under which attacks may not be illegal?
Why are pets are a hazard to your health?
What diseases can they transmit? What can be done to reduce the hazard?
What is a domestic animal and why is it important to define them?
What animals can be protected by Rabies Vaccination?
What regulations may be available to control non-domestic animals? (Consider Bubba & Sundance).
How would you capture loose animals?
How would you restrain animals?

Latest References:

8 [Dangerous](#) Pets
The [Deadly Dozen](#)
[Eliminating](#) Malaria
A [Rabid Kitten](#) CDC Report

The [Yellow Fever Pandemic](#), a 1901 classic report by Walter Reed MD, reprinted with comments in the AMA

References:

The Ecology of Stray Dogs (A study of Free-Ranging Urban Animals). Beck, A. York Press. Baltimore, 1973
Social Behavior in Animals.

Zoonotic Diseases. Where to go for advice. Animal Sheltering March-April 1996.

Human Rabies in Florida. JAMA Sept 16 1996, Vol. 270 No 11 P 865.

The Black Widow Spider. NEJM. June 5. 1997, Vol. 336, Number 23.

[Bioterror Links](#)

Zoonotic Diseases: Where to go

TIPS FOR PET OWNERS

Pet owners are far more likely to contract most Zoonotic diseases from contaminated food or drinking water than they are from their healthy companion animals. Still, as added precautions, pet owners should follow these Safety tips:

• Take your pets to the veterinarian for routine check-ups and at the first sign of health problems (like diarrhea). • Have your pets dewormed and vaccinated. • Keep your animals and home as free of fleas as possible. • Prevent bites and scratches by teaching children to play gently with pets	• If your pet scratches or bites you, wash the wound thoroughly and apply an antibacterial ointment. (For severe bites or scratches, call your physician.) • Keep your cat's nails trimmed (but do not subject them to declaw surgery). • Wear gloves when scooping or changing litter. • Wear gloves when cleaning up after puppies and removing feces from lawn	• Make sure children wash their hands thoroughly after they handle pets. • Cover children's sandboxes when the children are not playing. • Wear gloves during and wash hands after gardening. • Keep all pets indoors (or under close supervision).
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