

**Rabies & Zoonoses of Public Health Interest & Animal Control,
Julia Murphy DVM, MS, DACVPM, C.M.G. Buttery M.D., MPH.**

Objectives:

([pdf version](#))

After this seminar students should be able to describe

- The community hazards of uncontrolled animal populations including pets and wild life.
- The hazards of rabies and
- 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.
- Why of protecting animal health enhances community health.

Concept:

Many of the "**Newly Emrrging**" diseases are diseases of animal origin such as SARS, Monkey Pox, and potentially Avian Flu. 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 for 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,

Special reading of interest to students:

Zoonoses Updates J. Am. Vet. Ass., 1931 N. Meacham Rd., Suite 100, Schaumburg, Illinois 60173]

References

CMG Buttery - [Essay No. 8](#) Vector & Animal Control,
Maxcy Rosenau 13th Edn. Chapter 12 pp 255-258 & 295-297 14th Edn. Chap 113
Sec. F, Chap 14 Scan 1-A.
The Ecology of Stray Dogs, Beck, A. York Press 1973 [still the gold standard for understanding feral animals.]

[Updated URLs](#)

Zoonoses. Julia Murphy DVM, MS, DACVPM & C.M.G. Buttery MD MPH

Look at Dr. Murphy's Power Point show [Zoonoses](#), (Here is the [PDF printable multi-slide version](#) of Dr Murphy's slides) Click on [VDH Web](#) and examine the Rabies Information. Also look at the CDC [Update on Rabies Zoonoses](#). Then, return to the VDH epidemiology [home page](#), 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. Also, look at the latest [Compendium](#) of Measures To Prevent Disease and Injury associated with Animals in Public Settings

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, Division of Animal Health & Welfare \(Virginia\)](#)
[Fairfax County Animal Control](#)
[City of Seattle Animal Control](#)
[Humane Society of the United States](#)
[Animal Shelter Information](#)
[Animal Poison Control](#)
[Animal Control Officer 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.

Before leaving this page be sure to look carefully at the AVHA statement on Feral Cats. Why would I want you to consider this?

[Review recommendations for Rabies Prevention](#) from the CDC and American Veterinary Medicine Association

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.

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.

Recently, several cities, including Richmond, were 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.

Consider whether 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 [dogbites in 2001-2](#) (note the problem that many federal reports get old quickly. There has been no update on this issue in the last 3 years. What did the Virginia General Assembly do about dog bites in the Session just completed? Why?

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 this HSUS .pdf [Report on Preventing Animal Bites](#)

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?

References:

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

Social Behavior in Animals. Tinbergen, N. Pub. Barton and Tanner (London) 1966.

Dog Bite Related Fatalities US 1996-96MMWR May 30, 1997 P463.

Dog Bites recognized as Public Health Problem. JAMA Jan 28, 1977, Vol. 277 No 4, P 278.

Recommendation of the Immunization Practice Advisory Committee. MMWR March 22, 1991. Vol. 40 p1 Rabies Prevention US – 1991

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.

Emerging Infectious Diseases. AFP. Jan 1977. Strausbaugh, L.;

Deer Ticks and the agents of Lyme Disease & Human Granulocytic Erlichiosis in a New York City Park. Emerging Infectious Diseases. 3(3):353-355. 1977 Daniels, TJ ET Al

[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:

<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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
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teaching children to play gently with pets	scooping or changing litter. <ul style="list-style-type: none"> • Wear gloves when cleaning up after puppies and removing feces from lawn 	close supervision).
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Where to Go for More Information

Organizations

Your state health department or public health veterinarian. They likely have information on Zoonotic diseases, especially those prevalent in your region

Centers for Disease Control and Prevention; CDC, Atlanta, GA 30333; **404-639-3311.**

National Institute of Allergy and Infectious Diseases; National Institutes of Health, Bethesda, MD 20205; **301-496-4000**

American Veterinary Medical Association; 1931 N. Meacham Rd.. #100, Schaumburg, IL 60173; **800-248-2862.**

Books

These books contain helpful chapters and charts on zoonotic diseases. Because most of the books are expensive, check them out at your local library or medical library. If your library doesn't have them, you may be able to request an Inter-Library Loan.

Zoonosis Updates, from the Journal of the American Veterinary Medical Association (1995); available for \$20 (\$12 for AVMA members) at the AVMA address listed above.

Handbook of Zoonoses, Second Edition (1994), George W. Beran, CRC Press.

The Merck Veterinary Manual, Seventh Edition (1991), Merck & Co, Inc.

Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals. Eighth Edition (1992), Comstock Publishing Associates.

Clinical Textbook for Veterinary Technicians. Third Edition. Dennis M. McCurnin; W.B. Saunders Company.

Animal Sheltering/March-April 1996

World Wide Web Pages

Web pages below provide information about zoonotic diseases.

Centers for Disease Control and Prevention (CDC) <http://www.cdc.gov/cdc.html>
National Center for Infectious Diseases (NCID) <http://cdc.gov/ncidod/ncid.htm>
National Institute of Allergy and Infectious Diseases

<http://web.fie.com/fedix/nih.html>
MIC-KIBIC at the Karolinska Institute
<http://www.mic.ki.se/Diseases/index.html>

Martindale's Health Science Guide '96

<http://www-sci.lib.uci.edu/~martindale/AHealth.html>

MedWeb: Public Health

<http://www.cc.emory.edu/WHSC/medweb.ph.html>

MedHdp General Library.

<http://medhlp.netusa.net/general.html>

FAQs Pets and HIV. <http://www.sonic.net/~pals/ptfaqs.html>

<http://medhlp.netusa.net/general.html>

FAQs Pets and HIV. <http://www.sonic.net/~pals/ptfaqs.html>

Humane Society of the U.S.

Back issues of Shelter Sense

To receive back issues containing these articles about zoonotic diseases, disease control, and safety precautions, contact **Animal Sheltering** magazine.

Proper sanitation: March 1989

Lyme disease: June/July 1990

Protection during disasters: November 1994

Zoonoses and HIV/AIDS: February 1995

Feline disease control: March 1995

Rabies control: September 1995

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Position Statement on Abandoned and-Feral Cats

The AVMA encourages and supports actions to eliminate the problem of abandoned and/or feral cats. The actions by humane, animal control, wildlife, and public health agencies that will minimize the numbers and impact of abandoned and/or feral cats include a combination of activities such as licensing requirements; discouraging free roaming cats; requiring rabies vaccinations for cats and issuing citations for unvaccinated animals; encouraging permanent animal identification; and encouraging sterilization.

If local and state ordinances permit abandoned and/or feral cats to be maintained in "managed colonies" during an interim period until the colony size can be reduced and eliminated by attrition, then the following minimum requirements should be implemented for the benefit of the animals' and the publics' health and welfare. Abandoned and/or feral cats that are not in "managed colonies" should be removed from their environment and treated in the same manner as other abandoned or stray animals in accordance with local and state ordinances.

1. The colony should be restricted to a well-defined relatively safe area, and not on lands managed for wildlife or other natural resources (e.g. state parks, wildlife refuge, etc.). Written permission of the landowner should be obtained.

2. The primary care giver(s) should register with local animal control to prevent interference with the colony, and to allow identification of individual members of the colony.

3. There should be a written protocol and matching record keeping system to ensure daily care for the animals, including personnel scheduling, feeding (day time only), watering, shelter maintenance, health monitoring, and census taking.

4. Maintenance of an ongoing health care program which provides universal vaccinations, medical and/or surgical care, and parasite control.

5. Humane capture to allow for:

a Health examination.

b. Serologic screening tests for infectious diseases (adoption or euthanasia if positive). Sterilization (early age gonadectomy if appropriate).

c. Animal identification (ear tipping, microchips, or ear studs).

d. Adoption of new kittens, newcomers to the colony, and all socializable adult cats with the goal of eventual elimination of the colony by attrition.

e. Return to the colony or euthanization of those cats that can not be socialized.

6. A written program of education and training should be provided for all care givers. This should include uniform standards and procedures for colony maintenance, as well as public health, occupational safety and environmental issues.

7. Signage should be provided indicating that animal abandonment is an infraction, and that abandoned cats may be turned over to animal control and indicating the dates and times animals are to be trapped, to ensure that owned cats are kept inside at that time.

8. A resource network for feral cat care givers, humane activists, veterinarians, public health officials, and animal control officers should be established to share information, perspectives, and cooperative solutions to the root causes of animal abandonment

Approved: AVMA Executive Board, July 19, 1996