

American Association of Feline Practitioners
Basic Guidelines of Judicious Therapeutic Use of Antimicrobials in Cats
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Panelists

Deborah Edwards, DVM, Diplomate ABVP (Feline Practice)
Panel Co-Chair
All Cats Hospital, P.A.
Largo, Florida

Ilona Rodan, DVM, Diplomate ABVP (Feline Practice)
Panel Co-Chair
Cat Care Clinic
Madison, Wisconsin

Helen Tuzio, DVM
Panel Co-Chair
Forest Hills Cat Hospital
Glendale, New York
Ross University School of Veterinary Medicine, New York, New York

Dawn Merton Boothe, DVM, PhD, Diplomate ACVIM, Diplomate ACVCP
Texas A&M Clinical Pharmacology Lab
College Station, Texas

Elyse Kent, DVM, Diplomate ABVP (Feline Practice)
Westside Hospital for Cats
Santa Monica, California

Lauren Trepenier, DVM, Ph.D., Diplomate ACVIM, Diplomate ACVCP
University of Wisconsin, School of Veterinary Medicine
Madison, Wisconsin

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Sara Stephens, DVM, Diplomate ABVP (Feline Practice)
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Introduction

The Basic Guidelines to Judicious Therapeutic Use of Antimicrobials in Cats are designed to provide information to aid practicing veterinarians in choosing appropriate antimicrobial therapy to best serve their patients and to help minimize the development of antimicrobial resistance. Presented below are the Principles of Judicious Therapeutic Use of Antimicrobials adopted as a framework document for the recommended guidelines developed for cats.

Position Statement

Veterinarians agree to protect animal and public health when they pledge the Veterinarian's Oath. It is the responsibility of veterinarians working with feline patients to maintain their health by routine health examinations, preventative strategies, and client education. When a condition exists that threatens or impairs

feline health and well being, it is important to obtain an accurate clinical diagnosis whenever possible. Once the decision is reached to use antimicrobial therapy, veterinarians strive to optimize therapeutic efficacy, minimize resistance to antimicrobials, and protect public and animal health.

The American Association of Feline Practitioners is committed to the following objectives as developed by the American Veterinary Medical Association's Steering Committee on Judicious Therapeutic Antimicrobial Use:

Support development of a scientific knowledge base that provides the basis for judicious therapeutic antimicrobial use.

Support educational efforts that promote judicious therapeutic antimicrobial use.

Preserve therapeutic efficacy of antimicrobials.

Ensure current and future availability of veterinary antimicrobials.

Judicious Therapeutic Use of Antimicrobials in Cats

Preventive strategies, such as appropriate husbandry and hygiene, routine health monitoring, and vaccinations should be emphasized.

Routine preventative health care in cats includes the following:

- * Vaccination against feline panleukopenia, feline herpesvirus-1, feline calicivirus and rabies at appropriate intervals.
- * The feline leukemia virus and feline immunodeficiency virus status of all cats should be known
- * Vaccination against feline leukemia virus for cats at-risk.
- * Parasite control, nutritional counseling and dental health care.
- * Client education and involvement to successfully adopt good preventative health care programs.
- * Appropriate hygiene and husbandry is especially important in multiple cat households and catteries.

Therapeutic antimicrobial use should be confined to appropriate clinical indications.

The definitive diagnosis should be established whenever possible.

- * Practitioners should strive to rule out viral infections, parasitism, mycotoxicosis, and nutritional imbalances that will not respond to antimicrobial therapies.
- * Antimicrobial therapy is not indicated in feline viral upper respiratory (feline herpesvirus and calicivirus) infections not complicated by secondary bacterial infection.
- * Most cases of feline lower urinary tract disease do not involve bacterial infection and in such cases antimicrobials are not indicated.

Therapeutic alternatives should be considered prior to antimicrobial therapy.

This includes supportive care, such as correction of fluid and electrolyte abnormalities, maintaining acid-base balance, and ensuring adequate nutrition. Surgical intervention may be necessary in some cases.

Culture and susceptibility results aid in the appropriate selection of antimicrobials.

- * In suspected urinary tract infection (UTIs) in cats, urine collected by cystocentesis can help

distinguish infection from contamination.

- * It is important to note that dilute urine in cats is a risk factor for UTIs, and infection may exist despite the lack of pyuria and bacteriuria on microscopic examination. Urine culture may be the only way to identify infection in such cases.
- * Ideally, minimum inhibitory concentrations (MIC) sensitivities should be done to identify the best choice of antimicrobials.
- * Gram stains can help determine appropriate antimicrobial choice while awaiting culture results. Since certain antimicrobials are more effective against gram positive or gram negative organisms, interim antimicrobial decisions can be based on gram stain and the site of infection.

Use narrow spectrum antimicrobials whenever appropriate.

It is best to choose an antimicrobial with a narrow spectrum that is effective against the organism.

Antimicrobials considered important in treating refractory infections in human or veterinary medicine should be used in animals only after careful review and reasonable justification.

Consider using other antimicrobials for initial therapy.¹

Treat for the shortest effective period possible in order to minimize therapeutic exposure to antimicrobials.

- * Culture and sensitivity at the conclusion of therapy will determine if additional therapy is necessary.
- * Rechecking complete blood counts and urine analyses may also be indicated.
- * For specific conditions, refer to other resources.

Judicious use of antimicrobials in cats requires the oversight of a veterinarian.

Judicious use of antimicrobials and extra-label use of antimicrobials should meet all requirements of a valid veterinarian-client-patient relationship (VCPR - see glossary).

Extralabel antimicrobial therapy must be prescribed in accordance with all federal laws including the Animal Medicinal Drug Use Clarification Act amendments to the Food, Drug, and Cosmetic Act and its regulations.

Veterinarians should work with those responsible for the care of animals to use antimicrobials judiciously.

- * Veterinarians must communicate clear, written directions to the client for antimicrobial use. Verbal communication and showing proper method of administration of medications are also important.
- * Clients should be advised to complete the entire course of medication even if signs of illness have abated.
- * Clients should be warned of potential adverse reactions, and what to do if any such reactions occur (for example, stop medication and call your veterinarian for further recommendations).

Regimens for therapeutic antimicrobial use should be optimized using current pharmacological information and principles.

The antimicrobial chosen should be effective against the organism and be able to penetrate the affected organ in a proper concentration to eliminate the offending organism.

The routine prophylactic use of antimicrobials should never be used as a substitute for good animal health management.

Sterile technique and proper tissue handling eliminate the need for prophylactic antibiotics in ovariohysterectomies and most other sterile procedures.

Minimize environmental contamination with antimicrobials whenever possible.

Accurate records of treatment and outcome should be used to evaluate therapeutic regimens.

Recognize risk factors for infections in cats and prevent or correct whenever possible. These include, but are not limited to:

- * Urinary catheterization
- * Dilute urine
- * Intravenous catheters
- * Dental disease
- * Cat fights
- * Environmental factors (stress, crowding, poor hygiene, transportation, temperature, ventilation and humidity)
- * Feline leukemia virus or feline immunodeficiency virus infection
- * Immunosuppressive drugs (chemotherapeutic agents, glucocorticoid therapy)
- * Diabetes mellitus (Diabetic cats are more prone to urinary tract, skin and mouth infections.)

- 1 In this context, this principle takes into account development of resistance or cross-resistance to important antimicrobials.

Glossary

Antibiotic--a chemical substance produced by a microorganism which has the capacity, in dilute solutions, to inhibit the growth of or to kill other microorganisms.

Antimicrobial--an agent that kills bacteria or suppresses their multiplication or growth. This includes antibiotics and synthetic agents. This excludes ionophores and arsenicals.

Narrow Spectrum Antimicrobial--an antimicrobial effective against a limited number of bacterial genera often applied to an antimicrobial active against either Gram-positive or Gram-negative bacteria.

Broad Spectrum Antimicrobial--an antimicrobial effective against a large number of bacterial genera; generally describes antibiotics effective against both Gram-positive and Gram-negative bacteria.

Antibiotic Resistance--a property of bacteria that confers the capacity to inactivate or exclude antibiotics or a mechanism that blocks the inhibitory or killing effects of antibiotics.

Extralabel--Extralabel use means actual use or intended use of a drug in an animal in a manner that is not in accordance with the approved labeling. This includes, but is not limited to, use in species not listed in the labeling, use for indications (disease or other conditions) not listed in the labeling, use at dosage levels, frequencies, or routes of administration other than those stated in the labeling, and deviation from the labeled withdrawal time based on these different uses.

Immunization--the process of rendering a subject immune or of becoming immune, either by conventional vaccination or exposure.

Monitoring--monitoring includes periodic health surveillance of the population or individual animal examination.

Therapeutic--treatment, control, and prevention of bacterial disease.

Veterinarian/Client/Patient Relationship (VCPR) -- A VCPR exists when all of the following conditions have been met:

1. The veterinarian has assumed the responsibility for making clinical judgements regarding the health of the animal(s) and the need for medical treatment, and the client has agreed to follow the veterinarian's instructions.

2. The veterinarian has sufficient knowledge of the animal(s) to initiate at least a general or preliminary diagnosis of the medical condition of the animal(s). This means that the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal(s) by virtue of an examination of the animal(s) or by medically appropriate and timely visits to the premises where the animal(s) are kept.

3. The veterinarian is readily available for follow-up evaluation, or has arranged for emergency coverage, in the event of adverse reactions or failure of the treatment regimen.

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