



## JOINT AABP-AVC JUDICIOUS THERAPEUTIC USE OF MEDICALLY IMPORTANT ANTIMICROBIALS IN CATTLE

The AABP and the AVC are committed to antimicrobial stewardship, which includes an emphasis on preventive health programs including husbandry, biosecurity, routine examinations, and immunization.

These guidelines are intended as an aid in preserving the effectiveness and availability of medically important antimicrobial drugs through conscientious oversight and responsible medical decision-making, while safe-guarding animal, public and environmental health.

The AABP and the AVC recognize that medically important antimicrobials remain necessary for animal health to treat, prevent, and control infectious disease in beef and dairy cattle and emphasize that preventive health programs can reduce the occurrence of disease and therefore the need for antimicrobial therapy.

Antimicrobial stewardship refers to the action that veterinarians take individually and as a profession to preserve the availability and effectiveness of antimicrobial drugs through conscientious oversight and responsible medical decision-making while safe-guarding animal, public and environmental health. Such stewardship involves maintaining animal health and welfare by implementing a variety of management strategies to prevent or reduce common infectious diseases; using an evidence-based approach in making decisions to use antimicrobial drugs; and then using antimicrobials judiciously, sparingly, and with continual evaluation of the outcomes of therapy, respecting the client's available resources. Following are the AABP and AVC's general guidelines for the prudent use of antimicrobials in beef and dairy cattle.

- 1** The veterinarian's primary responsibility is to help design biosecurity and biocontainment programs which include appropriate immunization, housing and nutritional components that will aid in reducing the transmission and incidence of infectious diseases and the need for antimicrobials.
- 2** Antimicrobials should only be used if there is a valid reason, after consideration of therapeutic alternatives, and within the confines of a valid veterinarian-client-patient relationship. These guidelines apply to both dispensing of antimicrobials and issuance of prescriptions or veterinary feed directives.
- 3** Veterinarians should properly select, prescribe, order, and use antimicrobial drugs considering the therapeutic intent of prevention, control, or treatment:
  - a.** The veterinarian should select an antimicrobial drug, product and regimen that is likely to be effective given the therapeutic intent, strong clinical evidence of the identity of the pathogen causing disease and based on clinical signs, history, necropsy examination, laboratory data, clinical experience, or epidemiological evidence. Therapeutic use does not include the use of antimicrobial drugs for purposes of production enhancement.
  - b.** Therapeutic plans should reflect best use principles. Regimens for antimicrobial use should be optimized using current pharmacological and microbiological information and principles. This includes using antimicrobials at an appropriate dosage and route of administration, for the shortest appropriate period, and in the smallest number of animals reasonable. The use of antimicrobials should be based on an evaluation of animal-specific risk factors rather than standard practice.
  - c.** Whenever possible, label instructions should be followed to include using antimicrobials labeled for the condition diagnosed following the labeled, dose, route, frequency, duration, and withholding period.
  - d.** Extra-label drug use must follow all relevant laws and regulations.



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- e. Compounding of antimicrobials from bulk drug substances for use in cattle is prohibited.
  - f. Combination antimicrobial therapy should be discouraged unless there is information to show an increase in efficacy or suppression of resistance development.
  - g. Drug integrity should be protected through proper handling, storage and observation of the expiration date.
- 4** Veterinarians prescribing antimicrobials should aspire to ensure proper use in the production facility through oversight of all medically important antimicrobials.
- a. Prescription or dispensed drug quantities should be appropriate to the production unit size and expected need so that stockpiling of antimicrobials on the production unit is avoided.
  - b. The veterinarian should have a role in training production facility personnel who use antimicrobials. This training should include indications, dosages, withdrawal times, route of administration, injection site precautions, storage, handling, record keeping and accurate diagnosis of common diseases. The veterinarian's role should be an ongoing one to ensure that all employees remain current on antimicrobial use.
  - c. Veterinarians are encouraged to provide written or computerized treatment protocols to clients that describe indications, meat and milk withdrawal times, and instructions for antimicrobial use in the production facility. All FDA record-keeping requirements must be followed.
  - d. The veterinarian should regularly monitor antimicrobial use on the production facility by reviewing and reconciling treatment records, drug inventory, and drug purchase history. The veterinarian should monitor labels to ensure that they are accurate and that the labels will enable animal caretakers to correctly use antimicrobials.
  - e. Veterinarians should participate in continuing education programs that address therapeutics and antimicrobial resistance.
  - f. Veterinarians are encouraged to evaluate the safety and efficacy of all antimicrobial modalities as information becomes available.