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## World Veterinary Association Position on Responsible Use of Antimicrobials

### BACKGROUND:

This paper presents a set of principles governing the responsible use of antimicrobials in animals. Other terms for these principles include judicious, prudent and appropriate use. These principles may form the backbone of and/or guide in the elaboration of more specific guidelines.

The availability and use of a variety of antimicrobials for animals is essential to assure animal health and welfare. However, there is a risk that the use of antimicrobials in animals can result in resistance to antimicrobials which negatively affects public and animal health. Therefore, the availability and use of antimicrobials in animals must be balanced to achieve good animal and public health. The profession of veterinary medicine is responsible to safeguard BOTH animal health and public health and therefore the World Veterinary Association strives to protect both animal and public health.

Decisions on how to manage the risk of antimicrobial resistance must be based on risk analysis (risk assessment, risk communication and risk management). Given the importance of antimicrobials for both animal health and public health; risk analysis must include evaluation of the risks to animal health and public health, as well as the benefits to public health, animal health and animal welfare from the use of antimicrobials in animals. Different countries or regions have chosen different risk management actions based on risk analysis, because of differences in the level of risk tolerance or differences on the emphasis placed on risks versus benefits to public health. Some countries and regions have banned the use of antimicrobials for growth promotion/feed efficiency while other countries have declined to do the same.

Risk analysis cannot be generalized to evaluate broad categories such as the reason for use, i.e., treatment of disease, prevention of disease, control of disease, or growth promotion/feed efficiency. Instead, the particulars such as class of antimicrobial, ability to confer resistance, frequency of use, method of administration, and importance in veterinary and human medicine need to be considered.

The **Global Basic Principles** below concentrate on the **use** and underpin the critical role of the veterinarian, and not on the governmental measures such as licensing and controls. However, the WVA:

- supports that each country should have an appropriate regulatory system for the licensing and control of veterinary drugs in general and antimicrobials in particular;
- urges that antimicrobials be used only in compliance with the laws and/or regulations of each country;
- urges that antimicrobials should be used only according veterinary examination and diagnosis
- recommends that counterfeit and other unregistered products should not be used and that such use be combated;

#### CONSIDERATIONS:

- ✓ Protecting animal health, through the prevention or relief of conditions that cause animal suffering, is an essential part of ensuring good animal welfare.
- ✓ A good animal welfare status will help the animal to maintain its natural resistance against diseases.
- ✓ Good animal health and welfare always starts with good care and management; minimizing adverse environmental exposures; ensuring availability of sufficient space, clean water, and a proper diet; and limited stress,
- ✓ Prevention, control and treatment of animal diseases are necessary parts of successful animal husbandry.
- ✓ Successful animal husbandry depends also upon policies of good veterinary governance.
- ✓ To achieve optimal animal health and welfare, adequate monitoring, surveillance and preventive medicine measures and open communication among animal caretakers, veterinary assistants, veterinary technicians, and veterinarians are essential.
- ✓ Routine or systemic use of drugs to compensate for poor hygienic conditions or management practices, and to mask signs of pain or distress shall not be allowed.
- ✓ Responsible use of antimicrobials by veterinarians plays an important role in protecting public health.
- ✓ Veterinarians play a key-role in helping to minimize and prevent antimicrobial resistance. Therefore, veterinarians need to be involved in antimicrobial use decision as well as policy and regulatory decisions.

#### THE GLOBAL BASIC PRINCIPLES:

- 1. In case of animal disease, the animals should be examined by a veterinarian, who makes a diagnosis, and recommends an effective treatment programme.**

When the decision is reached to use antimicrobials for therapy, veterinarians should strive to optimize therapeutic effectiveness and minimize resistance to antimicrobials in order to protect public and animal health.

**2. Antimicrobials used for therapy are health management tools that are licensed to be used for the purpose of:**

- a. disease treatment
- b. disease control
- c. disease prevention

Additionally, some countries may license certain antimicrobials to be used in food-producing animals to enhance production through growth promotion and feed efficiency, although such use is prohibited in certain countries and regions, for example in the European Union. The antimicrobials may control or prevent disease and thereby enhance production. In general, long time exposure to antimicrobials is not to be encouraged and like all uses of antimicrobials, growth promotion and feed efficiency uses should be subjected to risk analysis, including animal and human health benefit assessments, to determine if risk management measures are needed and, if needed, what are appropriate risk management options, for example veterinary oversight.

**3. Codes of good veterinary practice, quality assurance programmes, herd health control and surveillance programmes, and education programmes should promote the responsible and prudent use of antimicrobials.**

Veterinarians must assume responsibility to stay knowledgeable about the current information on resistance because they are accountable for the safe and effective use of these medicines.

**4. Antimicrobials should be used only with veterinary involvement.**

Regular, close veterinary involvement is essential for informed advice concerning the effective use of antimicrobials. Regardless of the distribution system available, the use of antimicrobials should be subject to appropriate professional advice, preferably by a veterinarian.

**5. The availability of effective antimicrobials should be based on risk analysis that considers the OIE list of Antimicrobials of Veterinary Importance.**

The availability of appropriate tools for preventing, controlling and treating disease, which include antimicrobials, are needed for veterinarians to be able to use to relieve animal pain and suffering. The continued availability of all classes of safe, effective antimicrobials for veterinary medicine is a critical component of both a safe food supply and optimal animal health and welfare. The large number of species to be treated and the wide range of diseases encountered require the wide availability of all classes more so than in human medicine with only one species requiring treatment

The OIE International Committee unanimously adopted the List of Antimicrobials of Veterinary Importance at its 75th General Session in May 2007. Veterinary antimicrobials are classified according to their importance as critical, highly important or important. Risk analysis should consider this list as well as the list developed by the World Health Organization that classifies the importance of human antimicrobials.

- 6. Therapeutic antimicrobials should be used when it is known or suspected that an infectious agent is present which will be susceptible to therapy. It is the responsibility of the veterinarian to choose the antimicrobial product, based on his/her informed professional judgment balancing the risks and benefits for humans and animals.**

The veterinarian shall have due regard to the public health risks of using veterinary medicines. Specifically for antimicrobials, the veterinarian shall have due consideration for the potential for decreased antimicrobial susceptibility in zoonotic and potentially zoonotic bacteria and target pathogens in animals, and for the antimicrobial residues of toxicological and microbiological significance. At the same time, benefits such as promoting the health and welfare of animals, assuring safe, wholesome and affordable food from healthy animals, while reducing human exposure to bacteria of animal origin, shall be taken into account.

- 7. When antimicrobials need to be used for therapy, bacteriological diagnosis with antimicrobial sensitivity testing should, whenever possible, be part of the informed professional clinical judgment.**

When treating a disease, the antimicrobial sensitivity of the causal organism should ideally be ascertained before therapy is started. In disease outbreaks involving high case mortality rates or where there are signs of rapid transmission of disease among contact animals, treatment may be started on the basis of clinical diagnosis. Even so, the antimicrobial sensitivity of the suspected causal organism should, where possible, be determined so that if treatment fails the regimen can be changed in the light of the results of sensitivity testing. Antimicrobial sensitivity trends should be monitored over time, and such monitoring used to guide clinical judgment on antimicrobial usage. Further efforts are required to harmonise the methods by which authorities are monitoring the prevalence of resistance. Surveillance systems must be made consistent; otherwise the interpretation of resistance data within regions becomes meaningless.

- 8. Label instructions should be carefully followed and due attention paid to species and disease indications and contra-indications, dosage regimen, withdrawal periods, storage instructions, and expiration dates for products.**

Off label or extra-label use of antimicrobials should be exceptional and as with all use of antimicrobials under the professional responsibility of a veterinarian, with careful justification, written prescription or instructions, and in accord with governmental regulations and guidance (e.g., the European Cascade System; the United States Code of Federal Regulations – 21 CFR 530). When existing, veterinarians have to follow the legal or regulatory systems in their country.

- 9. Antimicrobials used for therapy should be used for as long as needed, over as short a dosage period as possible, and at the appropriate dosage regimen.**

***Dosage regimen:*** It is essential to administer the antimicrobial in accordance with the recommended dosage regimen. This will minimize therapy failures, exploit fully the effective potential of the product, and comply with the applicable withdrawal times.

Each class of antimicrobials has its own unique pharmacodynamic properties which are expressed fully when the recommended dosage regimen is applied. Veterinarians and animal owners alike must endeavor to always ensure that the correct dose is given and adhered to for the time of treatment recommended.

***As long as necessary:*** Insufficient duration of administration can lead to recrudescence of the infection. This may lead to increased likelihood of selecting micro-organisms with reduced antimicrobial sensitivity.

***As short as possible:*** Limiting the duration of use to only that required for therapeutic effect will minimize the exposure of the bacterial population to the antimicrobial. The adverse effects on the surviving commensal microflora are minimized and the medical impact of the remaining zoonotic organisms is minimized/reduced. Theoretically, antimicrobial use should be stopped as soon as the animal's own host defense system can control the infection itself.

#### **10. Records should be kept of all antimicrobial administrations**

The implementation of record-keeping [ways, means and by whom] should be according to applicable legislation and/or regulations. However, in order to ensure compatibility and usability of recorded data, some harmonization of the principles and of the format is needed.

#### **11. Coordinated susceptibility monitoring and surveillance should be conducted and the results should be provided to the prescriber/supervising veterinarians and other relevant parties.**

Monitoring and surveillance should target micro-organisms of both veterinary and public health importance. Data from diagnostic laboratories [with collection of samples from pathogenic specimens] have an inherent bias towards a higher percentage of resistant strains than pre-treatment specimens. Therefore, it is encouraged to also gather data from samples collected at random from farms, slaughterhouses, or food in order to investigate the prevalence and incidence of resistance in veterinary pathogens, zoonotic pathogens, and sentinel organisms. Data should be quickly provided to prescribers/supervising veterinarians and other relevant parties; which will allow the modification of antimicrobial usage to balance the benefits with the risks. Accessibility to the data will vary from programme to programme and should normally be determined beforehand.

#### **12. Efficacious, scientifically proven alternatives to antimicrobials are needed as an important part of good husbandry practices**

Among the research needs, it is suggested to look into the development of effective alternatives to the use of antimicrobials and to evaluate the impact that these alternatives [e.g. vaccines, probiotics, competitive exclusion principles and products, nutrition, and new health technologies and strategies, including improved livestock management] might have on selection for resistance while research into new antimicrobial options continue.

**WVA wants to maintain the effectiveness of the antimicrobial medicaments for treating sick animals and human beings. The WVA realizes that new types of medicaments should be developed as the effectiveness of the presently known antimicrobials might be limited. The WVA should take part in any position making body in the area.**

Notes:

1] The word antimicrobials covers all antimicrobial products administered orally and parenterally to animals, i.e. antibiotics [produced by fermentation of live micro-organisms] but also chemically –synthesized compounds with antibiotic activity such as sulphonamides and quinolones; it does not include disinfectants and sanitizers.