

BRITISH VETERINARY POULTRY ASSOCIATION

Antimicrobials Guidelines

BACKGROUND

Therapeutic antimicrobial products are prescribed and used by veterinary surgeons for the treatment and control of many types of bacterial infection in a wide variety of animal species. If a number of animals in a group have overt signs of disease, both sick and healthy animals may need to be treated with therapeutic levels of an approved antimicrobial product for the recommended period. This is intended to cure the clinically affected animals and prevent the progression of disease in the remainder.

Antimicrobial resistance is a natural phenomenon which is an inherent risk associated with any use of antimicrobial medication both in animals and humans. Opinion is divided on the practical effects of any resistance associated with antimicrobial use in animals on human health. There is the potential for spread of resistant organisms from treated humans (directly or via sewage effluent) to animal species, and from treated animals to humans (either by direct contact, environmental contamination, or foodborne contamination). Measures aimed at limiting the development of resistance are important for prolonging the useful life of all antimicrobials in both human and animal medicine.

Use of antimicrobial substances for growth promotion is no longer permitted under EU regulation.

GUIDING PRINCIPLES

1. Antimicrobial medication should not be used as an alternative to good management, vaccination or site hygiene.
2. Antimicrobial products should be used within general principles of responsible use:
 - 2.1. Use only when clinically necessary
 - 2.2. Treatment duration should be limited to that necessary to treat disease
 - 2.3. Treatment should be given only to birds showing clinical signs or those at immediate risk of infection
3. **RCVS Code of Conduct.**¹

Prescribing of antimicrobials must only be carried out for animals under the care of the prescribing veterinarian as defined in the RCVS Code of Conduct. Prescription-only medicines (POM-V) may only be supplied when prescribed by a veterinary surgeon. A copy of the prescription should be retained by the prescriber for at least 5 years. All antimicrobials are classified as POM-V medicines.
4. **Justification for treatment.**

The prescribing veterinarian must be satisfied that treatment is justified, following either examination of the animals in question on a site visit or by post-mortem examination, or following a consultation, all of which should be documented. The person issuing the prescription shall verify that this medication is justified for the target animals on veterinary grounds.
5. **Evidence-based treatment.**

In all uses of antimicrobials the best available information should be used to determine treatment

¹ Code of Professional Conduct for Veterinary Surgeons. <http://www.rcvs.org.uk/advice-and-guidance/code-of-professional-conduct-for-veterinary-surgeons/supporting-guidance/veterinary-medicines/>

regimens and dosages aimed at providing optimal efficacy with minimal risk of collateral resistance development in either the target organisms, potentially zoonotic organisms, or organisms capable of transmitting resistance to pathogens. The marketing authorisation holder will be the normal source of such information.

6. Comprehensive programme.

Detailed preventative medicine programmes should be documented for all companies and/or farms, typically in the form of a Veterinary Health and Welfare Plan. These should include all routine medications (including non-prescription medicines such as some anticoccidials and anthelmintics), competitive exclusion and probiotic treatments and vaccines. Any prescribing of antimicrobial medication should be made taking into account its possible effects on other aspects of the programme (in particular live bacterial vaccines, competitive exclusion, and monitoring of *Salmonella* and *Mycoplasma* status).

7. Antimicrobial sensitivity.

In an outbreak of bacterial animal disease, the sensitivity of the causal organism should, ideally, be ascertained before therapy is started. In disease outbreaks involving high mortality, or where there are signs of rapid spread of disease among in-contact animals, treatment may be started on the basis of clinical diagnosis. Even so, the sensitivity of the suspected causal bacterial organism should, where possible, be determined so that if treatment fails it can be changed in the light of results of sensitivity testing. Antimicrobial sensitivity trends should be monitored over time and such monitoring may be used to guide clinical judgement on antimicrobial usage.

8. Preventive medication.

The use of therapeutic antimicrobial products in the absence of clinical disease or specific pathogen infections and, in particular, administration to prevent disease should not be practiced without a clear justification with respect to the health and welfare of the treated birds.

However, it is recognised that preventative medication may be appropriate in certain precisely defined circumstances. Each veterinary practice should develop a written policy or protocol covering the circumstances in which this is considered appropriate.

However, it should be noted that ‘treatment and prevention’ claims are being removed from the label indications of antibiotics, and where appropriate replaced by ‘treatment and metaphylaxis’.

The term “metaphylaxis” refers to the administration of the product at the same time to a group of clinically healthy (but presumably infected) in-contact animals, to prevent them from developing clinical signs, and to prevent further spread of the disease. The presence of the disease in the group/flock must be established before the product is used. A metaphylaxis claim will always have to be combined with a treatment claim.²

9. Medicated feed.

In the case of feed medicated with antibiotics, this may be used only for the animals for which the prescription was intended and only for a diagnosed disease.

10. Off-label use.³

Any use of antimicrobials outwith the above guidelines, in particular use of antimicrobials outside normal data-sheet recommendations (in accordance with “the cascade”) should be carefully justified, for instance as part of the written prescription.

² EMA 2014. Answers to the requests for scientific advice on the impact on public health and animal health of the use of antibiotics in animals. http://www.ema.europa.eu/docs/en_GB/document_library/Other/2014/07/WC500170253.pdf

³ VMD: The Cascade: Prescribing unauthorised medicines. <https://www.gov.uk/guidance/the-cascade-prescribing-unauthorised-medicines>

Where an antimicrobial is administered off-label to a different species but for the same indication as the authorised product, or for the same species but a different indication, where the dose rate and duration are the same or lower than that authorised, then the approved withdrawal period for the authorised product may be applied. Where the dose or duration exceeds the authorised figures, standard withdrawal periods must be applied, as detailed in the VMD guidance.

11. **Treatment monitoring.**

It is acceptable and desirable for QA schemes to monitor antimicrobial usage, medication documentation, and withdrawal period compliance. However such schemes must not prevent the attending veterinarian from taking steps to alleviate suffering in the animals under his care or encourage under-dosing. Tracking of antimicrobial usage should take into account the concentration of active ingredient. Any usage where the mg/kg dosage does not match the licensed values would need to be justified. The gamebird industry uses gross tonnage of antimicrobial use. The meat sector uses mg of antimicrobial per population correction units (mg/PCU)⁴, where PCU represents a standardised weight of the species of poultry at the time of treatment. The egg sector records both the weight of birds treated and mg of antimicrobial unit, but monitors use on the basis of defined daily doses as a proportion of the total number of bird/days at risk.

In October 2017 the RUMA Targets Task Force published a report with sector specific targets, for poultry meat (chicken, duck and turkey) and for gamebirds. Members are urged to familiarise themselves with the report and work with producers to achieve these targets.⁵

12. **Use of antimicrobials in humans.**

The Association acknowledges the potential role of veterinary use of antimicrobials in the development of resistance in the human field. Certain antimicrobials are defined as critically important for treatment of human disease, and their veterinary use should therefore take human usage into account. The WHO provides a list of critically important antimicrobials (CIAs) to be used as a reference to help formulate and prioritise risk assessment and management strategies for limiting resistance due to human and veterinary use.⁶ The European Medicines Agency (EMA) Antimicrobial Expert Group (AMEG) have further assessed CIAs based on their risk to human health.⁷ The VMD follows this assessment with respect to antimicrobial use in the UK. This classification is as follows:

⁴ <https://www.gov.uk/government/publications/understanding-the-mgpcu-calculation-used-for-antibiotic-monitoring-in-food-producing-animals>

⁵ RUMA Targets Task Force Report 2017 <http://www.ruma.org.uk/wp-content/uploads/2017/10/RUMA-Targets-Task-Force-Report-2017-FINAL.pdf>

⁶ WHO 2017. Critically Important Antimicrobials for Human Medicine http://www.who.int/foodsafety/areas_work/antimicrobial-resistance/cia/en/

⁷ EMA 2014. Answers to the requests for scientific advice on the impact on public health and animal health of the use of antibiotics in animals. http://www.ema.europa.eu/docs/en_GB/document_library/Other/2014/07/WC500170253.pdf

13.

Category	Risk to public health	Antimicrobials included	Advice on use
1	Low/limited risk to public health	Narrow spectrum penicillins, macrolides, tetracyclines, Pleuromutilins, potentiated sulphonamides	General principles of responsible use to be applied
2	Higher risk to public health	Fluoroquinolones, systemic 3rd /4th generation Cephalosporins, (Aminoglycosides, broad-spectrum Penicillins), Colistin	Restricted to use where there are no alternatives or response to alternatives expected to be poor
3	Antimicrobials currently not approved for use in veterinary medicine. Veterinary use only under exceptional circumstances, and only in non-food producing species.		

The Association recommends that members take into account all of the above issues before prescribing any antimicrobials that are of importance in human medicine. Consideration should be given to the principles of ‘One Health’ approach to protecting human health includes collaboration between human, animal and/or environmental health entities on disease surveillance, outbreak response and prevention in order to achieve an optimal outcome.

It is recommended that each veterinary practice should develop a written policy or protocol dealing with all aspects of antimicrobial use dealt with in this guideline.

Ultimately, the continued use of antimicrobials depends on responsible prescribing by the veterinary surgeon.

Further reading

1. The O’Neill Report (2016) Tackling drug-resistant infections globally: final report and recommendations (The Review on Antimicrobial Resistance) –http://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf
2. RUMA Guideline “Responsible use of antimicrobials in poultry production” 2014 <http://www.ruma.org.uk/wp-content/uploads/2014/09/poultryandgameApr20141.pdf>
3. BVA: Responsible use of antimicrobials in veterinary practice. http://www.bva.co.uk/uploadedFiles/Content/News_campaigns_and_policies/Policies/Medicines/responsible-use-of-antimicrobials-in-veterinary-practice.pdf
4. BPC Antibiotic Stewardship Report 2017 <http://www.britishpoultry.org.uk/download/bpc-antibiotic-stewardship-report-2017/>

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