



Responsible Use of Antibiotics

Overview

Antibiotics are vital medicines, which are used for the treatment of both human and animal bacterial infections. In order to ensure the continued availability and effectiveness of these medicines they must be used responsibly. This briefing document highlights the core principles of responsible antibiotic use and some of the major initiatives that are promoting the responsible use of antibiotics in people and animals.

Responsible Use of Medicines in Agriculture Alliance (RUMA)

The animal health sector supports important initiatives promoting best practice in animal medicine (1, 2). In the UK, the responsible use of medicines in agriculture alliance or RUMA was established in 1997 to promote high standards in food safety and animal health and welfare in the livestock industry (1). RUMA is an independent, non-profit, group with membership from a wide variety of organisations representing all stages of the food chain from 'farm to fork'.

RUMA has played a significant role in the promotion of the responsible use of antibiotics and has developed a series of guidelines for the responsible use of antibiotics in livestock, which are designed for farmers and veterinary surgeons (3). These guidelines are also tailored for poultry, pig, cattle, sheep and fish farming.

Underlying all these guidelines are guiding principles of disease control. On farm, reducing the need to use antibiotics in the first instance can be achieved by developing and implementing herd and flock health plans with the veterinary surgeon. These bespoke plans take individual factors on farm and animal health history into account and focus on preventative health measures. This means good biosecurity, hygiene, nutrition and reducing stress. The use of vaccines, where available are a key preventative health tool to reduce the incidence or severity of disease and the need to treat infections with antibiotics.

Antibiotic Guardian and 'One Health'

Many of the classes of antibiotics used today are necessary to protect the health and welfare of both people and animals. This means it is essential to ensure these medicines are used responsibly and that a range of antibiotics continues to be available and effective for animals and people who need them.

The key message of responsible use is widely acknowledged by both human and veterinary medical professions. This is demonstrated by the '[Antibiotic Guardian](#)' initiative, which was developed by Public Health England (PHE) in collaboration with Department of Health's Expert Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infections (ARHAI); the Department for Environment Food and Rural Affairs (DEFRA), the Devolved Administrations and professional bodies/organisations (4). This 'One Health' initiative invites everyone - the public (with specific pledges for pet and horse owners), students and educators, farmers, the veterinary and medical communities and professional organisations to make a pledge about how they will make better use of antibiotics and become 'Antibiotic Guardians'. The pledges are designed to reflect how these different communities can best play their part (5).

Key Principles for Antibiotic Use in Animals

Importantly, when antibiotics are needed for animals, they can only be prescribed by a veterinary surgeon. A vet will not prescribe an antibiotic if it is not appropriate, in the same way as people should not expect an antibiotic to fight a cold, for example. It is particularly important, when antibiotics are prescribed, that the instructions are followed exactly as directed by the veterinary surgeon. Practically, this means giving the animal the correct dose of antibiotic for the entire duration of treatment. As each prescription is intended to be delivered in full, antibiotics must only be given to the animal(s) on the prescription.

These measures ensure that animals receive the optimal dose of antibiotic, for the required amount of

time to inhibit or kill the bacteria causing the infection or disease. Reducing the duration of treatment or reducing the dose prescribed can impact on the effectiveness of treatment and allow the survival of resistant bacteria.

Summary

Safeguarding our antibiotics, as vital medicines for animal and human health, is a priority for all those involved in prescribing and using antibiotics.

As highlighted here, both the animal and human medicine sectors have developed initiatives, and issued guidance, to achieve common goals.

Looking to the future, collaboration and co-ordination of resources and knowledge is needed for the further development and forward momentum of responsible use initiatives.

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What is NOAH?

The National Office of Animal Health Ltd represents the UK animal medicine industry: its aim is to promote the benefits of safe, effective, quality medicines for the health and welfare of all animals. For further information, including more briefing documents on animal medicines topics see www.noah.co.uk and follow @UKNOAH on Twitter.

References

1. Responsible Use of Medicines in Agriculture Alliance (RUMA), homepage and overview: www.ruma.org.uk
2. European Platform for the Responsible Use of Medicines in Agriculture <http://www.epruma.eu/>
3. RUMA guidelines on responsible use of antimicrobials: www.ruma.org.uk/antimicrobials/guidelines/
4. Antibiotic guardian initiative. <http://antibioticguardian.com/>
5. Antibiotic Guardian Pledges, Annex 1, attached to this briefing document.

Annex 1: Antibiotic Guardian Pledges: <http://antibioticguardian.com/>

Pet/Horse Owners	Farmers	Veterinary & Nurses Teams
To help reduce the risk of my animal(s) getting an infection which requires antibiotic treatment, I will keep them healthy through exercise, good nutrition, relevant vaccination, suitable accommodation and by having regular veterinary health checks	To help reduce the need for antibiotics I will work with my veterinary surgeon to keep an up to date Animal Health Plan. This will include, if necessary, changes to farm practices such as biosecurity	I will ensure clients have and understand all the information they need to administer the antibiotic correctly to their animal(s) per the prescription or instruction as well as understand the importance of following the instructions on the label
If my vet prescribes antibiotics for my animal(s), I will follow the instructions provided and I will not change the dosage or stop the therapy early	If I have a disease on my farm, I will work with my vet to identify the cause and any preventative measures which could stop spread or re-infection, so as to reduce the need for antibiotics in the future	I will ensure that there are effective and up to date cleaning and disinfection protocols in place to minimise the spread of bacteria between patients within the veterinary practice premises
If my vet prescribes antibiotics to my animal(s), I will not re-use antibiotics prescribed for an earlier illness or give them to other animals or animal owners and I will dispose of unused or expired products appropriately	If my vet prescribes antibiotics, I will give them in accordance with the instructions provided – e.g. dose, withdrawal period – and make sure that unused or expired products are returned or disposed of correctly and not given to animal(s) for which they have not been prescribed.	I will promote culture and sensitivity testing before prescribing antibiotics wherever possible and I will report any suspected antibiotics treatment failure to the Marketing Authorisation Holder (MAH) or the Veterinary Medicines Directorate (VMD)
I will not request antibiotics if my vet has not recommended or prescribed them	I will keep full record of all medicines purchased and used in my animals – including in-feed and in-water medicines	If there is a need to prescribe antibiotics I will use narrow spectrum drugs wherever possible
I will support vets' efforts to reduce the risk of antimicrobial resistance by better understanding where and when antibiotics are needed e.g. by being familiar with the Protect ME campaign from BEVA	I will annually review and discuss the antibiotic use on my farm with my vet, and look for ways of optimising my use as necessary	I will reduce the reliance on prophylactic use of antibiotics in farm animals by working with farm clients to produce a clear animal health plan which encourages good bio-security and husbandry practices
	I will keep my animal(s) healthy through good nutrition and husbandry, relevant vaccination and worming and by having regular veterinary health checks	I will maintain awareness of antimicrobial resistance through continuous professional development (CPD) and promote a culture of responsible use of antibiotics at work and within my professional network