Antimicrobial resistance (AMR) and farm animal welfare

Due to concerns regarding antimicrobial resistance (AMR), there is currently a drive to reduce the use of antimicrobials for farm animals.

The term 'antimicrobials' refers to medicines that kill or inhibit the growth of many agents that cause infectious diseases: bacteria, parasites, fungi and viruses. However, it is specifically the use of antibiotics, i.e. those medicines that kill or inhibit bacteria, that is of particular concern at present.

This concern has arisen because some antibiotics are becoming less effective at curing bacterial infections, i.e. some bacteria have demonstrated full or partial resistance to some antibiotics. This phenomenon is referred to as antimicrobial resistance (AMR). Addressing this issue is therefore essential to help safeguard the health of animals and humans in the future.

At certain times, the use of antibiotics are required to treat bacterial infections and prevent further deterioration of health in sick or injured animals. However, as with all medicines, **antibiotics should only be used when necessary, and always used responsibly.**

Not using antibiotics, reducing dosages, or reducing the length of treatment to use a lesser quantity to meet reduction targets is not considered responsible use. Such misuse could compromise animal health and welfare, as well as encourage the development of antibiotic resistance.

The success of any antibiotic reduction strategy should be examined in the context of its overall impact on animal welfare. **As such, trends in antibiotic use should be mapped against trends in animal welfare to ensure antibiotic reduction strategies are not pursued at the expense of welfare.**

Clearly, **prevention is better than cure, and it is the implementation of prevention strategies alongside the adoption of farming practices that *prioritise and promote* animal welfare that are key to reducing antibiotic use.**

Many health conditions, such as colitis in pigs, pneumonia in cattle, and footrot in sheep, which can require antibiotic treatment, can also largely be prevented through the adoption of good husbandry practices. Further, the adoption of good vaccination and quarantine protocols are practical management measures that aim to keep animals in a good state of health.

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Prevention strategies, however, may involve the use of other antimicrobials, such as anti-parasite medication, to help avoid, i.e. prevent, poor health, and thus reduce susceptibility to bacterial infection.

The RSPCA acknowledges the ongoing efforts of the farming industry and the veterinary profession in trying to responsibly reduce the use of antimicrobials in farm animals and strongly supports and encourages application of the Responsible Use of Medicines in Agriculture Alliance (RUMA) guidelines on-farm. Further, we encourage producers to undertake verifiable training regarding antimicrobial use on-farm, such as the NPTC Level 2 training on the *'Safe and Responsible use of Veterinary Medicines'*, which is available from City and Guilds. Other courses are also being developed and are likely to provide essential training in this area.

The RSPCA believes the use of antibiotics in farm animals should be limited to the following instances only:

1. TO TREAT AND CURE SICK ANIMALS

This is known as **curative treatment**, or therapy, and is where a sick animal or group of animals are treated only after a diagnosis of a disease or infection has been identified.

or:

2. TO CONTROL DISEASE SPREADING IN GROUPS OF ANIMALS WHERE SOME ARE ALREADY SICK

This is sometimes referred to as **metaphylaxis**. Here, a group of animals is treated after a clinical disease has been diagnosed within the group. This aims to prevent the spread of disease to other animals in close contact, and at risk, which may already be [sub-clinically] infected. Note that non-infected animals are being treated here based on the likelihood that they've been exposed, and will become infected, despite not necessarily showing clinical signs of the disease.

Other reasons antibiotics are used are to prevent sickness or disease developing in a group of healthy animals where a vet has identified that there could be a **high risk** of bacterial infection. Such **preventive treatment** is sometimes referred to as **prophylaxis.** This is where an individual animal or group of animals are treated before there are clinical signs of the disease, to prevent the occurrence of a disease or infection.

Ideally, preventive administration of antibiotics should not be used, and **should certainly not be used routinely.** However, it is acknowledged that some exceptional circumstances may lead to a veterinary surgeon prescribing antibiotics as a preventative measure. We would expect these to be rare, and limited to a smaller number of animals e.g. in the case of a traffic incident where animals have been transported for longer than planned, or in sub-optimal conditions, or an unforeseen breakdown in a management system which has led to animals being exposed to a high level of stress.

With regards the use of **Critically Important Antimicrobials (CIAs)** (as determined by the World Health Organisation), these should only be used in individual animals when the causative organism has been established and shown to be responsive to a CIA only (i.e. following sampling and culturing with sensitivity testing).

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