



## **PIG HEALTH AND WELFARE COUNCIL AND PIG VETERINARY SOCIETY**

### **Best Practice Guide to Antibiotic Usage Review on Pig Farms**

#### **Introduction**

1. Antimicrobial resistance, especially antibiotic resistance, has become a major issue and calls are being made to reduce the use of antibiotics in both humans and animals. Criticism has been made of the perceived high use of antibiotics in pig production and, in particular, the routine use of antibiotics to prevent disease.

2. The PHWC supports the responsible use of antibiotics. This means minimising the need to use antibiotics by managing the farm to reduce the risk of disease challenge. However, it is recognised that to maintain the health and welfare of the pigs under the veterinary surgeon's care, there is often a need to treat a range of diseases or syndromes that arise due to bacterial pathogens that are endemic on farms. The aetiology of these syndromes can be complex, involving a number of organisms and environmental interactions. The continuous nature of pig breeding and production on a weekly or batch basis provides a dynamic population of naïve animals that may require antibiotics to control clinical signs or mortality. The use of these antibiotics should not be on a routine or habitual basis and antibiotics should never be used for growth promotion.

#### **Reviewing Antibiotic Use**

3. A review of antibiotic usage should apply to all pig keepers, whether or not they are Quality Assured, and should ideally be undertaken at least quarterly. It is considered that the review should include the following procedures.

##### **3.1 Clinical Appraisal:**

- a) Clinical Inspection of the herd including examination of individuals, where appropriate, and update from the pig keeper.
- b) Analysis of production and mortality data.
- c) Review of abattoir monitoring reports (where applicable).
- d) Review of treatment records and outcomes from those treatments.
- e) Review of laboratory results in support of clinical diagnosis. It is recommended that culture and sensitivity testing of the pathogens being treated (where technically feasible) should be repeated after a maximum interval of 12 months to ensure the ongoing need for an antibiotic. The removal of the medicine may be necessary to carry out this testing and if that removal is likely to have a significant impact on the welfare of that group of animals their welfare must take priority. NB - Disc diffusion is the standard method of assessing antimicrobial sensitivity in diagnostic laboratories. The results are recognised as providing a useful guide

but in vitro sensitivity or resistance does not always correlate with in vivo sensitivity or resistance. The results should, therefore, be used in the context of the clinical response on-farm and the pharmacokinetic/pharmacodynamic properties of each antimicrobial.

### 3.2 Further Investigations:

It may be necessary to undertake further investigation on a farm where the Clinical Appraisal has highlighted a problem such as:

- A reduced efficacy of an existing treatment.
- An increase in clinical disease from a previously controlled situation
- An increase in mortality or in individual or group treatments administered.

Further investigation will always be required where a new disease or syndrome is suspected.

### 3.3 Recommendations in Writing:

Following discussion with the owner and farm manager of the findings described in 1 and 2 above, it is strongly advised that all recommendations should be given to the pig keeper in writing in a Veterinary Health Plan or a report appended to the VHP. This should detail the antibiotic to be used, the dose rate, route of administration and the withdrawal period for that product. It should also list the management controls that have been advised to control primary bacterial pathogens and other complicating pathogens including viruses.

The VHP should show justification for the use of the antibiotic based on the clinical investigation, laboratory data and consideration of alternative control methods. There should be reference to the Pig Veterinary Society's Prescribing Guidelines <http://www.pigvetsoc.org.uk/files/document/92/1401%20PIG%20VETERINARY%20SOCIETY-PP%20final.pdf> and the rationale for the selection of the particular antibiotic used, such as using a 'Level 2 ' antibiotic due to a mixed aetiology of pathogens or to the documented response to treatment of the bacterium found on that particular premises.

4. This guidance has been prepared jointly by the Pig Health and Welfare Council's Antimicrobial Use Sub-Group and the Pig Veterinary Society.

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