# NPA BRIEFING

## Last Updated June 2024

## Antibiotics Use in Pigs

## Background:

- As pigs are housed in groups, control of infection at the group level is often necessary to successfully manage disease problems in pig herds. This is achieved through administration of antibiotics in feed or water to groups of pigs, rather than treatment of individual pigs. However, where appropriate pigs can also be treated individually using injectable medication.

- One form of group treatment is known a “metaphylaxis”. Within a group there may be some animals showing symptoms of disease that require treatment; the remaining animals in the group will also be given antibiotics in case they are already infected and not yet showing signs, to prevent them from becoming ill. Metaphylaxis is also occasionally used in human medicine. For example, if a school child is diagnosed with bacterial meningitis, the other children in their class will be treated with antibiotics in case they have already been infected.

- When there is a known history of a certain bacteria affecting pigs on a unit, animals that are at risk of becoming infected may be treated with antibiotics against the bacteria to prevent them becoming ill. This preventative use is known as “prophylaxis”.

- Pig producers and their vets have recognised that use of antibiotics routinely for prevention is not acceptable and are working hard to phase this out. However, targeted prophylaxis remains an important tool to protect pig health and welfare in a variety of circumstances, for example where no vaccines are available against a certain disease.

- Antibiotics that are to be administered via the feed are typically incorporated at feed mills (under veterinary prescription only) to produce accurately formulated medicated compound animal feed. Antibiotics can also be administered via drinking water, with medication initiated promptly, which avoids delays while waiting for medicated feed to arrive. Equally, antibiotics can be removed immediately once the course has finished. In-water medication allows treatment of groups of animals (or individual animals that may require treatment) which may have poor appetites but are still drinking.

- In May 2016 NPA launched its Pig Industry Antibiotic Stewardship Programme [1] which includes the following strands of activity:
    - Capture and collate antibiotic use data recorded on pig farms
    - Benchmark each farm's antibiotic use against other farms of a similar type
    - Extend education in effective disease control strategies
    - Reduce antibiotic use, consistent with responsible human and food-animal medicine
    - Promote veterinary prescribing principles [2]
    - to strictly limit the use of antibiotics of critical importance to human health

- A progress report for the Pig Industry Antibiotic Stewardship Programme was published in 2018, outlining ongoing activity within the pig sector to reduce and refine antibiotic use [3].


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- The British pig industry is proactive about tackling AMR. While veterinary antimicrobial sales data have been analysed for a number of years, until recently there was no system in place for accurately capturing data relating to their exact usage on farm. Many antibiotic products used in pigs are licensed for use in both pigs and poultry; with sales data alone it is difficult to ascertain which species they have been used to treat. In recognition of this knowledge gap, AHDB Pork worked closely with UK Government to develop on an industry-wide system of electronically collecting usage data from pig units.

- The electronic medicine book (eMB-Pigs) was launched in May 2016 and enables pig producers to record their antibiotic usage and monitor usage trends over time. The eMB also enables producers to benchmark their usage against similar farms. AHDB Pork can share anonymous, aggregated data with the VMD when national data is sought.

- Since 2017 the pig sector has worked targets set by the Responsible Use of Medicines Alliance, which were first published in 2017 and ran until 2020. This first set of targets helped focus activity across the UK livestock sectors to achieve a 52% reduction in antibiotic use since 2014. Highest Priority Critically Important Antibiotic (HP-CIA) sales for UK food producing animals have also fallen 79% since 2014, and sales of colistin are virtually nil [4].

- The second phase of RUMA TTF targets (2021-2024) shows the ongoing livestock sector commitment to further reduce use where this is sustainable. As a result, only 26% of all the antibiotics used in the UK, are now used in the billion plus poultry birds, laying hens, sheep, cows, pigs, fish and game produced to feed the nation, and for export. This is a downward shift of about 12% since 2014.

- In 2023 sales of veterinary antibiotics in the UK have fallen to the lowest level ever recorded, driven partly by reductions in pig sector usage. The Veterinary Medicines Directorate's (VMD) 2023 UK-Veterinary Antimicrobial Resistance and Sales Surveillance (VARSS) [5] report shows sales of antibiotics for use in food-producing animals fell by nearly 10% in 2022 to 25.7mg/kg PCU. This represents a 59% reduction on the 2014 figure of 62.5mg/kg.

- In terms of pig sector antibiotic usage, figures collated on the eMB-Pigs database and published earlier this year show a further 18% reduction in 2022 to below 72mg/kg PCU, representing a massive reduction on the 2015 figure of 278mg/kg PCU. Use of Highest Priority Critically Important Antibiotics in pigs fell again, from 0.03 to 0.01mg/kg PCU with no use of colistin recorded.

- 94% of pigs produced in the UK are from units that are members of Red Tractor Farm Assurance. Since October 2017 the scheme has required that producers upload their antibiotic use data on a quarterly basis to eMB. The collated data must be reviewed at least annually with the farm's vet.

- The Red Tractor scheme also requires that the farm's vet must prescribe antibiotics in accordance with the Pig Veterinary Society's Prescribing Principles [2] and the vet's justification for prescription of a critically important antibiotic must be recorded.

- Red Tractor units also have quarterly vet visits and monitor indicators of welfare in finisher pigs through the Real Welfare scheme; these are important for understanding on farm health and welfare, targeting problem areas, improving management and ultimately reducing the requirement for medical intervention.

- There are several reasons why the pig industry uses antibiotics at the current volume including, but not limited to:
    - A wide range of persistent endemic bacterial disease challenges for which vaccines are not available, reliable or economically attractive

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  - Continuous production systems that allow diseases to continuously recycle in a dynamic farm population
  - Old buildings which compromise environmental control and pig husbandry
  - Inadequate internal and external biosecurity measures
  - Geographical clustering of pig farms, leading to disease exchange and spread

- To further reduce the volume of antibiotics used on pig farms, support will be needed from Government for investment in infrastructure and pig health improvement programmes and there will also need to be a proportionate and responsible approach from the supply chain.

**NPA position:**

- The NPA supports a global holistic approach to tackling AMR, involving cooperation from human and veterinary medicine, agriculture, trade and environment sectors.

- The NPA is of the opinion that antibiotics must not be used as a substitute for good farm management; rather they should be complementary to biosecurity, farm hygiene and appropriate vaccination programs.

- Routine preventive use of antibiotics in pigs should not be allowed as a replacement to the above measures. Nevertheless, we believe preventative use should be allowed under precise and defined conditions and left to the judgement of the vet based on their clinical and epidemiological knowledge.

- The use of highest priority critically important antibiotics for human health is already restricted as part of the Pig Veterinary Society prescribing principles. However, NPA is concerned that further unsubstantiated restriction of antibiotics available to the agricultural sector could lead to reliance on too few antibiotic classes and may increase the rate in which resistance could occur.

- The intensive versus extensive farming debate is not linked to antimicrobial resistance.

- Animals can become infected with bacteria and require antimicrobial treatment regardless of the system in which they are kept.

- A number of the commitments of the Pig Industry Antibiotic Stewardship Programme have now been achieved, while others are ongoing. NPA will continue to work with other organisations to support the pig industry's continued progress towards using antibiotics more responsibly.

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**References**

[1] NPA Pig Industry Antibiotic Stewardship Programme
[2] Pig Veterinary Society Prescribing Principles for Antimicrobials
[3] NPA Pig Industry Antibiotic Stewardship Programme review 2018
[4] RUMA Targets Taskforce
[5] UK Veterinary Antibiotic Resistance and Sales Surveillance Report 2022 (published 2023)

**END**

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