

Dramatic increases to UK poultry industry's use of 'critically important' antibiotic as human resistance reaches record levels

New data obtained by the Bureau of Investigative Journalism from the UK's Veterinary Medicines Directorate (VMD) has revealed that the poultry industry's use of fluoroquinolone antibiotics, which are classified as critically important in human medicine by the World Health Organization (WHO), went up by 59% between 2013 and 2014 [1].

The significant increase in fluoroquinolone use in poultry farming has been mirrored by rising resistance to the antibiotics in human campylobacter infections, which has reached record levels. Scientists believe the overuse of fluoroquinolones in poultry is contributing to higher levels of resistance in human infections, as resistant bacteria can pass from chickens to people. Strong evidence that this is happening led to the US banning fluoroquinolone use in poultry in 2005.

A recently published study found that nearly 50% of campylobacter cases at the Royal Liverpool University Hospital were resistant to fluoroquinolones [2]. The scientists involved in the research said that resistance is now so high that these antibiotics can no longer be relied upon for treating campylobacter infections. They pinpointed the veterinary use of antibiotics as the most likely cause of the increasing rates of resistance. Data from the VMD showed that the rate of fluoroquinolone resistance in the main type of campylobacter from poultry increased from 31% in 2013 to 44% in 2014 [3].

Campylobacter is estimated to cause around half a million infections a year in the UK, and poultry are thought to be the largest source of human infections. Fluoroquinolones are very important antibiotics for treating certain campylobacter infections in people, and the WHO has advised governments several times to give a high priority to cutting their use in farm animals.

Emma Rose of the Alliance to Save Our Antibiotics said: "Scientists have been warning for twenty-five years that the medical use of fluoroquinolones was being undermined by their use in poultry, but these shocking new figures show that all these warnings have been to no avail.

"The Government needs to follow the examples set in many other countries, like the United States, and ban all use of these antibiotics in poultry, as well as taking urgent action to reduce farm-use of other important antibiotics. Policy-makers are gathering in a few weeks in Brussels to vote on a proposal to ban routine, preventative mass medication of groups of animals in the EU. In the light of these findings, it is crucial that the UK Government support such a ban."

The mass-medication of animals with antibiotics is common in veterinary medicine, to prevent disease among intensively farmed animals. Fluoroquinolones are widely used in intensive farming to treat a wide variety of diseases. Under current EU legislation, if a small number of chickens in a flock show signs of ill-health, these antibiotics can be added to the drinking water of the whole flock, even when most of the birds are healthy.

Scientists have frequently been outspoken about the consequences of overusing antibiotics in poultry. A review carried out by scientists from Public Health England, Oxford University and Swansea University of UK studies of retail chicken, which was published in 2013, found widespread resistance to fluoroquinolone and other antibiotics [4]. The scientists said: "Since retail poultry is considered to be one of the most important reservoirs of human

campylobacter infections, this pervasive resistance is likely to have far-reaching public health consequences."

On 17th February, MEPs on the Committee on the Environment, Public Health and Food Safety will vote on the Veterinary Medicines Regulation, which proposes an EU-wide ban on the purely preventative mass medication of farm animals via their feed and water.

Notes for Editors

The Alliance to Save Our Antibiotics is an alliance of health, medical, environmental and animal welfare groups working to stop the overuse of antibiotics in animal farming. It was founded by Compassion in World Farming, the Soil Association and Sustain in 2009, and is supported by the Jeremy Coller Foundation. Its vision is a world in which human and animal health and wellbeing are protected by food and farming systems that do not rely routinely on antibiotics and related drugs.

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1. The British Poultry Council (BPC) voluntarily collected antibiotic usage data from its members and submitted it to the VMD. An overall figure was then published by the VMD, but without a breakdown by antibiotic family. A Freedom of Information request submitted by the Bureau of Investigative Journalism to the VMD subsequently established that in 2013 BPC members use 710 kg of active ingredient of fluoroquinolones and this increased to 1,126 kg in 2014. BPC members produce about 90% of British poultry meat. Antibiotic use in game birds and in the egg industry is not covered by the BPC statistics.
2. Stockdale et al. 2015, Emergence of extensive fluoroquinolone resistance in *Campylobacter* gastroenteritis in Liverpool, UK, *The Journal of Infection*
3. See p35, UK Veterinary Antibiotic Resistance and Sales Surveillance 2014, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/477788/Optimised_version_-_VARSS_Report_2014_Sales_Resistance_.pdf
4. Wimlarathna et al. 2013, Widespread acquisition of antimicrobial resistance among *Campylobacter* isolates from UK retail poultry and evidence for clonal expansion of resistant lineages, *BMC Microbiology*