

## Preventive use of antibiotics - a response to Veterinary Record report

Dear Sir/Madam,

It is disappointing that the medical doctors persist in downgrading our efforts in reducing the use of antibiotics in veterinary medicine and insisting we should stop all preventive medication (VR, 24<sup>th</sup> November 2018, vol 183, p 612). I see their action was coordinated by the Alliance to Save Our Antibiotics, a lobbyist group with organic and vegetarian influences. Did they advise the medical professionals that in the UK we have reduced the overall use of antibiotics by 40% by 2017 (RUMA, 2018), that poultry use had declined by an incredible 82%, pig use by 50% and the use of the critical important antimicrobials substantially, by 52%. Only an estimated 30% of antibiotics are used in farm animal medicine now, which suggests that the bulk (approximately 2/3) of antibiotics, potentially going into the environment and water, are primarily from human use.

As a veterinarian, I have been a supporter of retaining the right to use antibiotics for prevention, especially where it was considered in the best interest of the animals under one's care, to stop infection and clinical disease and thereby improving their welfare (Burch, 2016).

I was disappointed that the letter was signed by the Royal College of Surgeons, who routinely use antibiotics prophylactically before and after surgery, before infection occurs and also that the Editor of the British Medical Journal, which has the same publisher as the Veterinary Record, also signed it. Do the editors not speak to each other, to get a proper briefing?

I realise the medical profession is facing a difficult time, seeing a nearly four-fold rise in infections (370%) and mortality (396%) in recent years (2007-2015) in patients in the EU, associated with carbapenem resistance (Cassini *et al*, 2018). However, such antibiotics are not licensed for use in veterinary medicine and therefore the problem is primarily of their own making. In a recent review paper (Chatterjee *et al*, 2018) quantifying drivers of antibiotic resistance in humans, they reported that previous antibiotic exposure (55% of studies), health care factors (53%), including invasive procedures (18%) and patient clinical history (47%) with underlying disease (23%) were the most commonly reported risk factors with the most supporting evidence. In contrast, food (meat) (6%), animal contact (3%) and antibiotic use in animals (0.38%) were reported as playing a comparatively minor role.

Both professions are working towards a 'one health' approach to the subject of antimicrobial resistance, wouldn't it be better that our professional bodies liaised with each other first, if they had concerns over current and future progress?

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### References

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Cassini, A., Hoegberg, L.D., Plachouris, D., Quattrocchi, A. and (11) others (2018) Attributable deaths and disability-adjusted life-years caused by infections with antibiotic-resistant bacteria in the EU and the European Economic Area in 2015: a population-level modelling analysis. *Lancet Infectious Diseases*, Published online November 5, 2018 [http://dx.doi.org/10.1016/S1473-3099\(18\)30605-4](http://dx.doi.org/10.1016/S1473-3099(18)30605-4)

Chatterjee, A., Modarai, M., Naylor, N.R., Boyd, S.E. and (5) others (2018) Quantifying drivers of antibiotic resistance in humans: a systemic review. *Lancet Infectious Diseases*, 18, e368-378. Published online August 29, 2018 [http://dx.doi.org/10.1016/S1473-3099\(18\)30296-2](http://dx.doi.org/10.1016/S1473-3099(18)30296-2)

Responsible Use of Medicines in Agriculture (RUMA) Alliance (2018) Targets Task Force: One Year On, November 2018. A report summarising the progress against antibiotic use targets identified by the UK livestock industry's Targets Task Force in October 2017. <https://www.ruma.org.uk/wp-content/uploads/2018/11/RUMA-TTF-1-year-on-Full-Report-FINAL.pdf>

Toll-free link:

<http://veterinaryrecord.bmj.com/cgi/content/full/vr.k5329?ikey=hz3ux7bnpI7eZxe&keytype=ref>