

European league-tables for antibiotic resistance revealed

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Tests of antibiotic resistance in cattle have revealed stark variation across thirteen European countries. The results, published today in BioMed Central's open-access journal *Acta Veterinaria Scandinavica*, show that major differences were apparent in the occurrence of resistance between countries and between the different antimicrobial agents tested.

In general, bacteria from Denmark, England (and Wales), the Netherlands, Norway, Sweden and Switzerland showed low frequencies of resistance, whereas many cultures from Belgium, France, Latvia and Spain were resistant to most antimicrobials tested.

The study was led by Rene S. Hendriksen from the Technical University of Denmark. He said, "The differences in resistance may reflect the differences in antimicrobial use between countries and veterinarians".

Hendriksen added, "Antimicrobial resistance is an increasingly important problem among several bacterial species. The problem has become so critical in some of these species that there are few treatment options left".

Of major concern is the level of resistance found in *Staphylococcus aureus* to antibiotics previously thought to be effective. The prevalence of oxacillin resistance in Spain and France and the resistance towards cephalosporins indicate the presence of methicillin resistant *S.aureus* (MRSA) in these two countries.

Furthermore, the authors found a frightening number of resistant samples of Escherichia Coli in France, Spain, Italy and Belgium. According to Hendriksen, “The seemingly emerging occurrence of resistance to important antimicrobial agents in Belgium, France, Italy and Spain is worrying. These four countries had the highest frequency of resistance to most antimicrobial agents, potentially making treatment difficult.”

The same authors recently published a similar report in Acta Veterinaria Scandinavica, which showed that antibacterial resistance in pigs also varies by country.

Based on the results of both of these studies, the authors recommend that, “The treatment of infected animals has to be based on local knowledge and observed local resistance patterns”.

Source: BioMed Central

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