

1 REPRINTED FROM POULTRY HEALTH TODAY



GIVING YOUR CUSTOMERS A CLEARER VIEW

Confidently presenting facts — not defensive rhetoric — can go a long way toward shaping consumer opinions about commercial poultry production and the importance of maintaining flock health,

welfare and efficiency. For this special feature, *Poultry Health Today* checked the facts behind three common claims about feed antibiotic usage.

Perception

80% of antibiotics in the US are used in farm animals.

Reality

This oft-cited figure can be misleading because it mixes numbers from two different reports — neither of which has anything to do with the other. The first is an FDA report summarizing the amount of “antimicrobials sold or distributed for use in food-producing animals” in 2011; the other report summarizes human antibiotic sales based on IMS Health data from the same year.¹

Moreover, FDA issued a cautionary statement on its website last April in which it outlined several factors that further complicate a comparison, including discrepancies in indication and duration of use, the number of humans in the population compared to the number of animals, and differences in human and animal physical characteristics, such as weight.²

In addition, the FDA noted that simply looking at weight of drug sold does not account for milligram dosage variations among antibiotics.

For example, the standard dosage of virginiamycin for a 5-lb broiler is different from the standard dosage for penicillin. Weight of drug sold is therefore a poor proxy for use across different drug classes.

Finally, the data in both reports reflect only the manufacturers’ sales or distribution of a drug — say, to a pharmacy or veterinary clinic — and not sales to the end user.

For these reasons, the FDA says, it is “difficult to draw definite conclusions from any direct comparisons between the quantity of antibacterial drugs sold for use in humans and the quantity sold for use in animals” and that “these points should be carefully considered when interpreting the data.”

¹ <http://www.ahi.org/issues-advocacy/animal-antibiotics/fact-or-fiction-common-antibiotic-myths/>
² <http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm348794.htm>

Perception

Antibiotic use in livestock animals is contributing to human antibiotic resistance.

Reality

The Centers for Disease Control and Prevention (CDC) reports that antibiotic resistance kills 65,000 people a year and costs \$4 billion to \$5 billion annually. Some consumer groups and news reports have tried linking this problem to antibiotic use in poultry and livestock, but there is little evidence to support this link.

Of the seven bacterial pathogens deemed by the Infectious Disease Society of America to pose the greatest resistance problems in humans, not one is foodborne, nor are any linked to animal contact or antibiotic use. In fact, most do not affect animals at all. Only *Pseudomonas aeruginosa*, a fluoroquinolone-resistant hospital pathogen, has been known very rarely to cause mastitis in dairy cows, but fluoroquinolones have never been approved for use in lactating cattle.³

continued



continued from page 21

Perception

Antibiotic use in livestock animals is contributing to human antibiotic resistance.

Reality

Furthermore, 87% of antibiotics used in animals are either never, or almost never, used in human medicine. According to the 2011 FDA report on animal drug use, 45% of all antibiotics used in animals are not approved for human use. Another 42% are tetracyclines, which are used only rarely to treat a limited range of human infections.⁴

Although the link between antibiotic use in animals and resistance in humans is currently very weak, multiple measures are in place to keep it that way.

Prior to obtaining required FDA approval, all antibiotics used in animals must demonstrate safety, efficacy and low risk of contributing to antibiotic resistance.

Once approved, all antibiotics are subject to oversight by the FDA, CDC and USDA. FDA, animal-health companies and third-party researchers also regularly conduct risk assessments and publish the results.

In addition, judicious-use programs developed by government, veterinary and industry organizations offer species-specific guidelines to ensure the safe and prudent use of antibiotics in animals, especially ones that are critical to human health. These programs are designed not only to limit resistance but also to keep antibiotics safe and effective for humans and animals alike, thereby contributing to a healthy food supply and a healthy population.

For more information on judicious-use programs in the poultry industry, search on your browser for FDA's "Judicious Use of Antimicrobials for Poultry Veterinarians," or the American Association of Avian Pathologists' "Guidelines to Judicious Therapeutic Use of Antimicrobials in Poultry."

³ <http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm348794.htm>

⁴ <http://www.foodsafetynews.com/2013/01/antibiotics-and-animals-raised-for-food-lies-damn-lies-and-statistics/#.Ujd-QLw6dPm>

Perception

MDR *Salmonella* in retail meats is a major public health threat.

Reality

The isolation of multidrug-resistant (MDR) strains of *Salmonella* from retail meats, particularly poultry, has raised concerns that consuming these products will lead to infections that do not respond to antibiotic treatment.

Although the poultry industry takes both *Salmonella* and antibiotic resistance seriously, it is necessary to address widespread misconceptions about MDR *Salmonella* and its impact on human health.

CDC estimates that *Salmonella* causes about 1 million (<2%) of the 48 million annually reported cases of foodborne illness in the US. According to a 2009 report by FDA's National Antimicrobial Resistance Monitoring System, 83% of all human *Salmonella* isolates responded to all antibiotics tested. However, antibiotics are seldom used to treat salmonellosis — regardless of resistance status — unless the patient has a blood infection or is deemed to be high-risk.⁵

According to published data cited by the Animal Health Institute, *Salmonella* is isolated from less than 1% of all bacterial bloodstream infections. Isolates from those infections showed resistance in less than 1% to fluoroquinolones and in 2% to 3% to third- or fourth-generation cephalosporins, the two preferred drug classes for treatment of severe *Salmonella* infections.

It is important for consumers to understand that *Salmonella* is not a single bacterium but a bacterial category with many different subtypes, or serotypes, some of which are naturally resistant to antimicrobials. There is no evidence to suggest a link between multidrug resistance and antibiotic use in animals. Different *Salmonella* populations naturally rise and fall over time, but slaughter samples of chickens, pigs and cattle show no overall increase in multidrug resistance across serotypes.⁶

Finally, consumers should be assured that properly cooking poultry kills all *Salmonella*, resistant or non-resistant. All poultry regulated by USDA comes with package instructions for cooking and handling that, when followed properly, ensure consistently safe eating.

⁵ <http://www.ahi.org/issues-advocacy/animal-antibiotics/fact-or-fiction-common-antibiotic-myths/>

⁶ <http://www.thepigsite.com/swinenews/32192/ippe-what-is-risk-from-multidrug-resistant-antibiotics>

