

Senate Bill 920

Antibiotic Resistance Fact Sheet

Therapeutic Use of Antibiotics

- Therapeutic use of antibiotics in food-producing animals is critical to **prevent, treat** and **control** disease. Judicious use is based on a Veterinarian-Client-Patient Relationship and carefully considered by veterinarians who rely on their scientific education and clinical experience and knowledge.
- Food animal medicine is population medicine (herd health). It is significantly different than human medicine and treatment of patients.
 - It is common in production medicine to provide therapeutic antibiotic treatment when a disease condition is expected or is in the beginning stage.
 - If disease (or disease concerns) is circulating within the “herd,” it is within the veterinarian’s professional experience and judgment to issue a prescription.
 - There are greater restrictions on use of medications in food-producing animals than in pet medicine. With food production, a veterinarian has no allowance to deviate from what is indicated for use on the drug’s label. **Note:** Labels are very specific in indicating dose, duration, indicated species, and, most importantly, disease condition or agent.

Important Change to the Veterinary Feed Directive

- The Food and Drug Administration (FDA) has regulatory oversight of antibiotics administered to food-producing animals. Concerned with non-judicious use of antibiotics for growth promotion, weight gain, and feed efficiency, the federal agency is working with stakeholders to discontinue this practice.
- With support from animal pharmaceutical companies and feed manufacturers, the approved use conditions for medically important drug products are being revised. This will become effective December 2016.
- The two significant changes that will occur are:
 - Once product labeling is voluntarily changed, it will be a federal violation to use these antibiotics in feed for growth promotion, feed efficiency, and weight gain. This directly answers concerns raised in Section 1, lines 21 and 22 of Senate Bill 920.
 - All antibiotic products currently available as Over-the-Counter will require producers to have a prescription or order from a licensed veterinarian to obtain these products.

About Resistant Bacteria

- Trends in the prevalence of resistant bacteria do not necessarily reflect trends in the incidences of either food-borne illness or resistant infections, which in many cases have declined in recent years.
- It is difficult to correlate antibiotic resistance among food-borne pathogens with antibiotic use on the farm. An increased incidence of illness in any give year may or may not relate to an increased use of antibiotics potentially selecting for resistant bacteria.
- Studies show that an individual's prior use of antibiotics is among the greatest risk factors associated with acquiring a resistant food-borne pathogen. It is imperative for doctors in both human and veterinary medicine to prescribe antibiotics appropriately – and for consumers to use antibiotics according to the prescriptions.
- When compliance – in both human and veterinary medicine – falls short, the incomplete course of treatment can create a resistance to that drug in people and in animals. In addition, a spontaneous resistance to a particular antibiotic can also occur.
- Of 18 pathogens being studied by the Centers for Disease Control (CDC) for resistant bacteria, two are found in food-producing animals: campylobacter and salmonella.
 - Most humans who experience campylobacter or salmonella recover on their own within three-to-five days and without antibiotic medication.
 - A small number of people (i.e., children, seniors, or those with a compromised immune system) are more seriously affected and require medical attention that includes antibiotic treatment.
 - The majority of cases of food-borne illness (i.e., campylobacter or salmonella) are preventable by good hygiene (i.e., washing hands) and food preparation and handling (i.e., cleaning utensils and cutting boards in contact with raw meat) and by cooking meats at the appropriate temperature.

Surveillance of Antimicrobial Resistance

- The National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS) is a collaborative effort among state and local public health departments, the CDC, the FDA, and the USDA.
- NARMS was launched in 1996 to preserve the effectiveness of medically important antimicrobial drugs that are used in food-producing animals. The primary objectives are to:
 - Monitor trends in antimicrobial resistance among food-borne bacteria for humans, animals, and retail meats.
 - Disseminate timely information on antimicrobial resistance to promote interventions that reduce resistance among food-borne bacteria.

- Conduct research to better understand the emergence, resistance, and spread of antimicrobial resistance.
- Assist the FDA in making decisions related to the approval of safe and effective antimicrobial drugs for animals.

How the Landscape Has Changed – for the Better

- The FDA has used data from NARMS to change how antimicrobials are used in agriculture. Several examples:
 - Withdrew the approval of fluoroquinolones for use in poultry.
 - Prohibited the extra-label use of fluoroquinolones and cephalosporins in cattle, swine, chickens and turkeys.
 - Initiated the change in the Veterinary Feed Directive and the agency’s final guidance on judicious use of medically important antimicrobials in food-producing animals.
- In addition to the change with the Veterinary Feed Directive, the FDA and USDA, in partnership with the CDC, advocate for quantitative assessment of antimicrobial use in food-producing animals – assessment that is both science-based and actionable.
- These federal agencies have the qualified experts – and financial support – to continue with their ongoing surveillance and assessment of antibiotic resistance concerns.