Saving Precious Lives

Protecting Children from Antibiotic-Resistant Bacteria

Many industrial farms routinely feed antibiotics to food animals to promote growth and to compensate for the unhealthy effects of overcrowded and unsanitary farm conditions. In fact, 70 percent of all antibiotics sold in the U.S. are given to healthy food animals, generally without the oversight of a veterinarian or other health specialist.[1] This practice creates new strains of deadly antibiotic-resistant bacteria that reach children and adults through the food supply. Antibiotic-resistant bacteria are more expensive to treat, require multiple applications of antibiotics, and longer hospital stays. The Alliance for the Prudent Use of Antibiotics estimates that antibiotic-resistance generates between $16.6 billion and $26 billion per year in extra costs to the U.S. health care system.[2]

The U.S. Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), and the Centers for Disease Control and Prevention (CDC) all have testified to a definitive link between the routine uses of antibiotics in food animal production and antibiotic resistance in humans.

ANTIBIOTIC-RESISTANT BACTERIA ARE DANGEROUS FOR CHILDREN

Children are particularly vulnerable to antibiotic-resistant infections[3] and they are at a greater risk of severe complications if they become infected with resistant bacteria. Children are less able to fight infection because their immune systems are still developing and they are limited in the types of antibiotics they can take when sick.

In addition, children are particularly vulnerable to foodborne illnesses. In fact, the CDC reports that almost half of the reported foodborne illnesses occur in children, with the majority of these cases diagnosed in children under age 15. Specifically, campylobacter infection rates in infants are twice that of the general population and more than one third of all cases of Salmonella infections occur in children younger than age 10.[4] Salmonella infection rates in children under one year of age is ten times higher than in the general population.[5] Adding to the urgency of this issue, E. coli[6], Salmonella[7], Campylobacter[8], Enterococcus[9], Streptococcus[10] and Staphylococcus[11], are increasingly resistant to common antibiotic treatments.

We need to take steps to protect our children from all antibiotic resistant bacteria, including strains of foodborne illnesses that are resistant to antibiotics, so we ensure that they can grow and thrive.

PROTECT OUR CHILDREN: TAKE ACTION TO END THE OVERUSE AND MISUSE OF ANTIBIOTICS IN FOOD ANIMAL PRODUCTION

Federal legislation and/or regulations are needed in order to preserve the effectiveness of these life-saving drugs and to protect human health. Here are three things you can do right now:

URGE THE FDA TO STRENGTHEN REGULATIONS

While FDA has taken some steps to protect antibiotics, stronger regulation is needed to stop the overuse and misuse of the drugs in food animal production. Most of the medically important antibiotics fed to healthy animals were grandfathered in before the agency began requiring drug companies to determine if use in food animals would contribute to antibiotic resistance in humans.

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First Focus
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Last year, the FDA released draft Guidance 209, The Judicious Use of Medically Important Antimicrobial Drugs in Food-Producing Animals, which lays out the FDA's new policy position on the use of medically important antibiotics in food animal production. This document proposes limiting medically important antibiotics to uses for assuring animal health and requiring antibiotics to be administered under veterinary oversight or consultation.

A final policy paper as well as guidelines outlining how pharmaceutical companies are expected to comply with the FDA's new policy was due out in June 2011, but has yet to be released.

STRENGTHEN FEDERAL ACTION

In January 2012, FDA issued an updated rule to limit the use of cephalosporins, a vital class of antibiotics, in food animal production. This FDA action allows for a 60 day public comment period and at its conclusion FDA must finalize the rule as written or make edits. This updated rule is a crucial first step, but more needs to be done, including finalizing guidance document 209.

SUPPORT PASSAGE OF THE PRESERVATION OF ANTIBIOTICS FOR MEDICAL TREATMENT ACT (PAMTA) OF 2011. (H.R. 965, S. 1211).

PAMTA would prohibit the routine, not-therapeutic use of seven classes of antibiotics vitally important to human health from food animal production except to treat a sick animal or herd or unless the FDA concludes that using the drugs does not contribute to antibiotic resistance in humans.

Hundreds of groups and medical experts already support this legislation including the American Medical Association, American Academy of Pediatricians, Infectious Diseases Society of America, and the American Nurses Association.

REINTRODUCE THE STRATEGIES TO ADDRESS ANTIMICROBIAL RESISTANCE (STAAR) ACT

The STAAR Act was most recently introduced in the 111th Congress, and would strengthen the government's ability to track, respond, and prevent antibiotic-resistant diseases. It would create a data collection system for the sales and use of antibiotics. This legislation should be reintroduced to create a strong governmental infrastructure to address this future potential public health crisis.

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[1] Margaret Mellon, C. Benbrook, and K. L. Benbrook, Hogging It! Estimates of Antimicrobial Abuse in Livestock (Cambridge, MA: Union of Concerned Scientists, 2001).

[2] James Gallagher, "Study: Antibiotics Problems Cost U.S. between $17B and $26B a Year," Triangle Business Journal, October 19, 2009, http://triangle.bizjournals.com/triangle/stories/2009/10/19/daily4.html (accessed July 15, 2010). Based on: Rebecca R. Roberts, et al., "Hospital and Societal Costs of Antimicrobial-Resistant Infections in a Chicago Teaching Hospital: Implications for Antibiotic Stewardship," Clinical Infectious Diseases 49 (2009): 1175–1184

[3] Katherine Shea, K. Florini, and T. Barlam, "When Wonder Drugs Don't Work: How Antibiotic Resistance Threatens Children, Seniors, and the Medically Vulnerable" (Washington, DC: Environmental Defense Fund, 2001).

[4] US Department of Agriculture, Food Safety and Inspection Service. Sentinal Site Study. The Establishment and Implementation of an Active Surveillance System for Bacterial Foodborne Diseases in the United States. Washington, DC: Food Safety and Inspection Service; 1997. Available at: www.fsis.usda.gov/OPHS/fsisrep2.htm.

[5] US Department of Agriculture, Food Safety and Inspection Service. Report to Congress. FoodNet: An Active Surveillance System for Bacterial Foodborne Diseases in the United States. Washington, DC: Food Safety and Inspection Service; 1999. Available at: www.fsis.usda.gov/ophs/rpcong98/rpcong98.htm

[6] Infectious Diseases Society of America, Bad Bugs, No Drugs: As Antibiotic Discovery Stagnates … A Public Health Crisis Brews (Alexandria, VA: Infectious Diseases Society of America, 2004). See also: James S. Lewis et al., "First Report of the Emergence of CTX-M-Type ExtendedSpectrum-Lactamases (ESBLs) as the Predominant ESBL Isolated in a U.S. Health Care System," Antimicrobial Agents and Chemotherapy 51, no. 110 (2007).

[7] Margaret Mellon, C. Benbrook, and K. L. Benbrook, Hogging It! Estimates of Antimicrobial Abuse in Livestock (Cambridge, MA: Union of Concerned Scientists, 2001).

[8] Ibid.
[9] Ibid
[10] Infectious Diseases Society of America, Bad Bugs, No Drugs. See also: Werner C. Albrich, D. L. Monnet, and S. Harbarth, "Antibiotic Selection Pressure and Resistance in Streptococcus pneumoniae and Streptococcus pyogenes," Emerging Infectious Diseases 10, no. 3 (2004): 514–517.
[11] Ibid. See also: R. Monina Klevens et al., "Invasive methicillin-resistant Staphylococcus aureus infections in the United States," Journal of the American Medical Association 298, no. 15 (2007): 1763–1771.