A fact sheet from THE PEW CHARITABLE TRUSTS | May 2014

Antibiotics and Industrial Farming 101

Why are our antibiotics becoming less effective while bacteria grow stronger?

Each year, at least 23,000 Americans die and 2 million are sickened because of bacterial infections resistant to antibiotics. Why are our antibiotics becoming less effective while bacteria grow stronger?

Antibiotic overuse on industrial farms is a big part of the problem. The largest U.S. meat and poultry producers feed antibiotics to healthy animals on a daily basis to make them grow faster and to compensate for the overcrowded and unsanitary conditions in which they are bred and slaughtered. Hundreds of studies conducted over the past four decades demonstrate that these practices breed superbugs that end up in our air and water, our food, and ultimately our bodies.[1] When they infect us, antibiotic-resistant bacteria are more difficult and costly to fight and more likely to cause death.

Antibiotic overuse by the numbers

In 2011, drugmakers sold 29.9 million pounds of antibiotics for use on industrial farms[2]—the most ever reported and four times the amount sold to treat sick people (Figure 1).

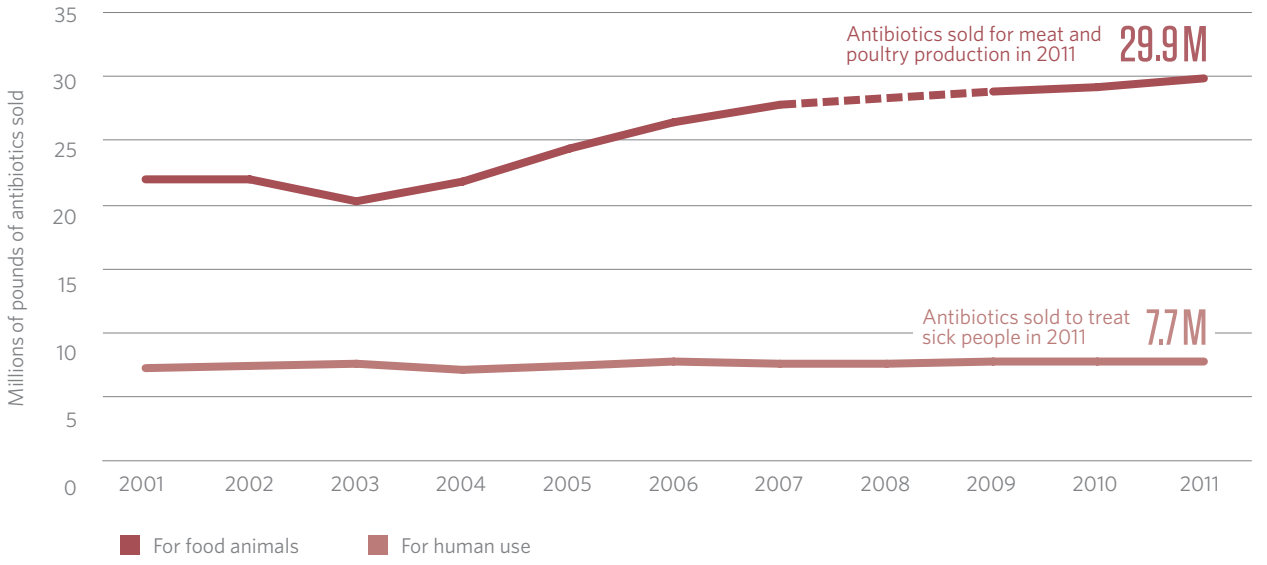
In 2009, the U.S. Food and Drug Administration reported that about 90 percent of these antibiotics were sold for use in food animals' feed and water.[3]

Industrial farms in the United States use about 300 milligrams of antibiotics to produce each kilogram of meat, which is about six times more than what is used in Denmark, the world's leading pork exporter.[4]

Figure 1

Overdosing Our Meat and Poultry

Comparison of amounts of antibiotics sold for animal and human use, 2001-11



Source: IMS Health Inc. (human sales data); Animal Health Institute survey of its members, 2001-07; U.S. Food and Drug Administration, 2009-11 (animal sales data)

What health leaders say

Representatives of the FDA, U.S. Department of Agriculture, and Centers for Disease Control and Prevention testified before Congress in July 2010 that there is a definitive link between the use of antibiotics in food animal production and antibiotic-resistant infections in people.[5]

The American Medical Association, American Academy of Pediatrics, Infectious Diseases Society of America, and many other leading U.S. medical and scientific organizations stated in a letter to Congress in September 2011: "The evidence is so strong of a link between misuse of antibiotics in food animals and human antibiotic resistance that FDA and Congress should be acting much more boldly and urgently to protect these vital drugs for human illness. … Overuse and misuse of important antibiotics in food animals must end in order to protect human health." [6]

What we can do

The answer is straightforward: Stop giving antibiotics to healthy animals. Here are several more specific steps to take.

Prevent the overuse of antibiotics used in food animal production

Two bills before Congress, the Preservation of Antibiotics for Medical Treatment Act (H.R. 1150) and the Preventing Antibiotic Resistance Act (S. 1256), would eliminate the practice of giving important antibiotics—those that are used in human medicine—to animals to make them grow faster or to compensate for overcrowded

and unsanitary conditions. These drugs would be available only to treat animals, flocks, or herds for actual diseases.

The FDA is taking steps to ask drug companies to voluntarily stop marketing antibiotics for purposes other than treating diseases. These voluntary policies are being implemented now, and the FDA has said it will monitor drug companies closely and mandate changes if antibiotic misuse persists.

Put veterinarians in the driver's seat

Antibiotics for animal use are available over the counter at feed stores and on the Internet, but for humans they require a prescription. The FDA is taking steps to require a prescription or its equivalent before antibiotics are given to animals or added to their feed. To help ensure that antibiotics are used judiciously, the FDA must require that veterinarians are familiar with the animals they are treating and visit farms regularly.

Make antibiotic use for food animals transparent

The FDA already collects data on antibiotic sales from veterinary drug companies, but it reports only overall sales by most classes of these drugs. The agency should report more detailed information, including how often antibiotics are distributed in feed, in water, and by injection; whether the drugs are also approved to treat humans; and whether they are sold over the counter or by prescription. The FDA should also collect more information, including for which animals the drugs are intended and the percentages that are being used nontherapeutically.

Congress is considering legislation— the Delivering Antimicrobial Transparency in Animals Act (H.R. 820) and the Antimicrobial Data Collection Act (S. 895)— that would broaden FDA's authority to collect more data from drug companies and food producers. The agency needs this information to know whether the policies described above are working and, if not, what additional actions must be taken.

Read the label

Consumers are in the best position to influence food producers. Buying meat and poultry bearing labels that say "raised without antibiotics" or "no antibiotics administered" encourages companies to use drugs responsibly.

The cost of antibiotic resistance

Every year, antibiotic-resistant infections sicken at least 2 million Americans and kill 23,000.[7]

Drug-resistant infections cost the U.S. health care system up to $26 billion[8] annually and prolong hospital stays by more than 8 million days.[9]

Endnotes

1 The Pew Charitable Trusts, *Antibiotic Resistance and Food Animal Production: A Bibliography of Scientific Studies (1969-2012)*, last modified Feb. 28, 2013, http://pewhealth.org/reports-analysis/issue-briefs/bibliography-on-antibiotic-resistance-and-food-anima1-production-85899368032.

2 U.S. Food and Drug Administration, *FDA Annual Report on Antimicrobials Sold or Distributed for Food-Producing Animals in 2011*, Feb. 5, 2013, http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm338178.htm.

3 Karen Meister, supervisory congressional affairs specialist, U.S. Food and Drug Administration, letter to Representative Louise Slaughter (D-NY), April 19, 2011.

4 Preservation of Antibiotics for Medical Treatment Act of 2009, hearing on H.R. 1549 before the U.S. House of Representatives Committee on Rules, statement of Frank M. Aarestrup and Henrik Wegener, National Food Institute, Technical University of Denmark, Soborg, July 13, 2009, http://www.livablefutureblog.com/wp-content/uploads/2009/08/testimony-of-dr-frank-moller-aarestrup-1.pdf.

5 Antibiotic Resistance and the Use of Antibiotics in Animal Agriculture, hearing before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Health, July 14, 2010, statement of John Clifford, Ali Khan, and Joshua Sharfstein, http://www.pewhealth.org/reports-analysis/issue-briefs/official-text-hearing-on-antibiotic-resistance-and-the-use-of-antibiotics-in-animal-agriculture-85899370904.

6 Alliance for the Prudent Use of Antibiotics et al., joint letter to Congress, "Sound Science: Antibiotic Use in Food Animals Leads to Drug Resistant Infections in People," Sept. 6, 2011, http://www.pewhealth.org/uploadedFiles/PHG/Content_Level_Pages/Issue_Briefs/Joint-Letter-State-Science-Antibiotic-Use-2011-09-06.pdf.

7 Centers for Disease Control and Prevention, *Antibiotic Resistance Threats in the United States*, 2013, Sept. 16, 2013, http://www.cdc.gov/drugresistance/threat-report-2013.

8 R.R. Roberts et al., "Hospital and Societal Costs of Antimicrobial-Resistant Infections in a Chicago Teaching Hospital: Implications for Antibiotic Stewardship," *Clinical Infectious Diseases* 49:8 (2009): 1175-1184, http://cid.oxfordjournals.org/content/49/8/1175.long.

9 Roberts et al., "Hospital and Societal Costs."

For further information, please visit:

saveantibiotics.org

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