In Sickness and in Health: The Case For Restricting Farm Antibiotics

By “Coach Vance” Trefethen

In Sickness and in Health: The Case For Restricting Farm Antibiotics 3

OBSERVATION 1. We offer the following DEFINITIONS. 3

OBSERVATION 2. INHERENCY, the structure of the Status Quo. 3

FACT 1. Irresponsible Farm Antibiotics 3

70% of antibiotics sold in the US are used on farms. The trend is growing. And it needs to stop. 3

FACT 2. Regulations inadequate 4

Current regulations are inadequate to control farm antibiotic use. They can’t agree on metrics, and usage keeps rising 4

OBSERVATION 3. The HARM: Drug resistant bacteria. We see this in 3 sub-points 4

A. Antibiotic resistance in humans is promoted by widespread use of antibiotics in animals 4

B. The First Impact is: Sickness and death 4

C. The Second Impact is: Higher health care costs 5

OBSERVATION 4. We offer the following PLAN implemented by Congress and the President 5

OBSERVATION 5. SOLVENCY. We see how PAMTA solves in 3 subpoints: 5

A. Antibiotics restricted. PAMTA bans non-therapeutic use of medically important antibiotics on farms. 5

B. Experts agree PAMTA is the solution. Hundreds of experts advocate PAMTA 6

C. Proven real-world success. In Denmark, farm antibiotic restrictions reduced antibiotic resistance in Danish livestock and among the Danish population, with no adverse impact on farm production 6

2A Evidence: Antibiotics 7

DEFINITIONS & BACKGROUND 7

Text of HR1552 7

Summary of what HR1522 does 7

OPENING QUOTES / AFFIRMATIVE PHILOSOPHY 7

Antibiotic resistance is a ticking time bomb that will blow us back to the Dark Ages 7

INHERENCY 7

Federal antibiotic restriction law (PAMTA) blocked and the new voluntary FDA guidelines aren’t effective 7

Status Quo federal response to farm antibiotics is insufficient 8

Current FDA regulations have loopholes that still allow antibiotics on the farm for non-sick animals 8

FDA rules aren’t enough, we need a total ban on non-therapeutic farm antibiotics 8

FDA guidelines contain a huge loophole: allowing use of antibiotics for disease prevention 9

Current regulations flawed: No specific targets, a problematic loophole, and little progress in reducing antibiotic use 9

Farm antibiotic use is trending up 9

“Why hasn’t Congress passed PAMTA yet?” Money, ignorance and old practices 10

HARMS / SIGNIFICANCE 10

Strong evidence and clear link between farm antibiotics and human antibiotic resistance 10

Farm antibiotics is responsible for ½ of drug resistance globally and as much as 80% of the problem in the US 10

Agricultural use of antibiotics creates dangerous drug-resistant bacteria. Example: Colistin 11

Farm antibiotics create human antibiotic resistance and sickness. Example: VRE 11

Farm antibiotics led to human sickness with resistant bacteria: Salmonella from turkey, 2011 11

Antibiotic resistant diseases cause 2 million sicknesses and 23,000 deaths per year in the US 11

Antibiotic-resistant infections cause sickness, death, and $20-$35 billion/year in health care costs in the US 12

If we lose antibiotics, in addition to infections disease, we also lose joint replacement, organ transplants, cancer therapy and treatments of other diseases 12

A/T “New / more powerful drugs can be used” – Drugs of last resort are more expensive, less effective and more dangerous to the patient 12

SOLVENCY / ADVOCACY 12

PAMTA meets the government’s obligation to stop farm antibiotic abuse 12

Tufts University Study: Farm antibiotics cause human antibiotic resistance, and removing them reverses the effect 13

Details on advocacy groups who recommend the plan, including the American Medical Association 13

Widespread expert advocacy for the Affirmative position 13

Evidence dates matter: Short term, if there’s no change in resistant bacteria, study it long-term and you’ll see it 13

Denmark experience was so successful, the Europe Union changed its policy too 14

DISADVANTAGE RESPONSES 14

A/T “Animal sickness will increase” – Denmark experience: Antibiotic use dropped over 50% and pig health improved 14

A/T “Higher food cost” and “Animal sickness” – Denmark experience: Cost per pig went up 1 euro and had less disease 14

In Sickness and in Health: The Case For Restricting Farm Antibiotics

Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman in the American Journal of Public Health, December 2015, repeated this urgent warning, when they said QUOTE:

“Recently, the World Health Organization called antimicrobial resistance “an increasingly serious threat to global public health that requires action across all government sectors and society.” [[1]](#footnote-1)

END QUOTE. The widespread use and abuse of antibiotics on farms is a key component of this urgent threat, compelling my partner and me to affirm: that The United States federal government should substantially reform its agriculture and/or food safety policy in the United States.

OBSERVATION 1. We offer the following DEFINITIONS.

**Policy**: “a high-level overall plan embracing the general goals and acceptable procedures especially of a governmental body” (*Merriam Webster Online Dictionary, copyright 2016* [*http://www.merriam-webster.com/dictionary/policy*](http://www.merriam-webster.com/dictionary/policy))  
  
**Substantial**: “large in amount, size or number” (*Merriam Webster Online Dictionary, copyright 2016* [*http://www.merriam-webster.com/dictionary/substantially*](http://www.merriam-webster.com/dictionary/substantially)*)*

**Agriculture:** “the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products” (*Merriam Webster Online Dictionary, copyright 2016* [*http://www.merriam-webster.com/dictionary/agriculture*](http://www.merriam-webster.com/dictionary/agriculture))

OBSERVATION 2. INHERENCY, the structure of the Status Quo.

FACT 1. Irresponsible Farm Antibiotics

70% of antibiotics sold in the US are used on farms. The trend is growing. And it needs to stop.

Bill Wenzel 2016 (Antibiotics Program Director at Public Interest Research Group) 11 Jan 2016 “[THE STATE OF ANTIBIOTICS 2016](http://www.uspirg.org/blogs/blog/usp/state-antibiotics-2016)” <http://www.uspirg.org/blogs/blog/usp/state-antibiotics-2016>

Evidence is mounting that it is only a matter of time before resistance develops to all classes of our life-saving medicines unless we use them responsibly: responsible use is not the meat industry standard. Despite decades of warnings and limited federal efforts to curb antibiotic use in agriculture, up to 70% of antibiotics sold in the U.S. are used on livestock and poultry. Many of these antibiotics are used on animals that aren’t sick to compensate for disease-ridden conditions, and to make animals grow fatter, faster. [Experts worldwide agree that this trend is directly contributing to the rise and spread of deadly bacteria.](http://www.who.int/drugresistance/use/en/) Yet, [sales data shows that agricultural usage has increased 23% over the last five years despite these warnings.](http://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM476258.pdf) As antibiotic resistance rises to become one of the premier public health concerns of the year and coming decades, it makes no sense at all to continue a practice that hastens the growth and spread of these deadly bacteria and dissolves a key pillar of modern medicine.

FACT 2. Regulations inadequate

Current regulations are inadequate to control farm antibiotic use. They can’t agree on metrics, and usage keeps rising

Steven Ross Johnson 2016 (journalist) 4 Apr 2016 Antibiotic use in livestock still widespread in spite of 'superbug' fight MODERN HEALTH CARE <http://www.modernhealthcare.com/article/20160404/NEWS/160409951>

By the end of this year, the FDA said in 2013, drug companies should voluntarily remove indications of growth promotion from product labels and veterinarians should supervise the use of the medications. Last May, the FDA proposed requiring drug companies to collect data on the type of species receiving the drugs. And last June, the agency issued a final rule on its Veterinary Feed Directive, which outlines how veterinarians are supposed to authorize the use of antibiotics in livestock.  But a White House advisory panel found little consensus among regulators and the drug and livestock industries about how to establish metrics for appropriate use. Meanwhile, sales figures show no reduction in the use of antibiotics in feed animals in spite of the mounting pressure against the practice. In a 2014 [summary report](http://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM476258.pdf) the FDA cited more than 16,000 tons of antibiotics approved for use in livestock were sold and distributed in the U.S. that year, which represented a 22% increase since 2009.

OBSERVATION 3. The HARM: Drug resistant bacteria. We see this in 3 sub-points

A. Antibiotic resistance in humans is promoted by widespread use of antibiotics in animals

Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman 2015 (Martin – MD, MPH, MBA. Thottathil – PhD. Newman – MD, MPH) Dec 2015 AMERICAN JOURNAL OF PUBLIC HEALTH, Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638249/>

Recently, the World Health Organization called antimicrobial resistance “an increasingly serious threat to global public health that requires action across all government sectors and society.” Of all antibiotics sold in the United States, approximately 80% are sold for use in animal agriculture; about 70% of these are “medically important” (i.e., from classes important to human medicine). Antibiotics are administered to animals in feed to marginally improve growth rates and to prevent infections, a practice projected to increase dramatically worldwide over the next 15 years. There is growing evidence that antibiotic resistance in humans is promoted by the widespread use of nontherapeutic antibiotics in animals. Resistant bacteria are transmitted to humans through direct contact with animals, by exposure to animal manure, through consumption of undercooked meat, and through contact with uncooked meat or surfaces meat has touched.

B. The First Impact is: Sickness and death

Bill Wenzel 2016 (Antibiotics Program Director at Public Interest Research Group) 11 Jan 2016 “[THE STATE OF ANTIBIOTICS 2016](http://www.uspirg.org/blogs/blog/usp/state-antibiotics-2016)” <http://www.uspirg.org/blogs/blog/usp/state-antibiotics-2016>

As drug-resistant bacteria rise faster than federal action to prevent them, preserving the effectiveness of antibiotics must be a priority for any organization working to protect public health – and that’s why we’ve made it ours. Antibiotic-resistant infections are on the rise, leading us ever-closer to the brink of the post-antibiotic era, in which minor cuts could be fatal, surgeries could endanger more than they save, and our life-saving medicines simply no longer work. Two million people are sickened by antibiotic resistant infections in the U.S. every year, according to estimates by the CDC. 23,000 die. [A report released last year](http://amr-review.org/) predicted that by 2050, antibiotic resistant infections could kill more people annually than cancer – up to 10 million people worldwide. So, it’s no coincidence that the CDC listed antibiotic resistance as one the top public health concerns of 2016.

C. The Second Impact is: Higher health care costs

Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman 2015 (Martin – MD, MPH, MBA. Thottathil – PhD. Newman – MD, MPH) Dec 2015 AMERICAN JOURNAL OF PUBLIC HEALTH, Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638249/>

The practice of medicine and the state of public health would be catastrophically affected if antibiotics were not generally effective in treating bacterial illnesses. Physicians and health care institutions are regularly cautioned to avoid unnecessary or incomplete treatment in an effort to stem potential antibiotic resistance, and antibiotic prescriptions are increasingly scrutinized as part of antimicrobial stewardship programs. However, the inappropriate overuse of antibiotics in animals also should be addressed as another important source of antibiotic resistance. To the degree that antibiotic overuse in food animals exacerbates problems with resistance, this overuse is a factor contributing to the increased costs to treat antibiotic-resistant infections in humans. According to the Infectious Diseases Society of America, longer, more expensive hospital stays for treating antibiotic resistance cost the US health care sector an estimated $21 to $34 billion and eight million additional hospital days annually.

OBSERVATION 4. We offer the following PLAN implemented by Congress and the President

1. Congress passes H.R.1552 - Preservation of Antibiotics for Medical Treatment Act of 2015, or “P.A.M.T.A.” pamta.  
2. Funding through existing agencies and existing budgets.

3. Enforcement through the US Dept of Agriculture and any other normal federal agencies. Violations subject to the same penalties as for similar crimes under existing law.  
4. Plan takes effect 31 days after an affirmative ballot.  
5. Affirmative speeches may clarify

OBSERVATION 5. SOLVENCY. We see how PAMTA solves in 3 subpoints:

A. Antibiotics restricted. PAMTA bans non-therapeutic use of medically important antibiotics on farms.

**In other words, they have to stop giving these antibiotics to animals that aren’t sick. PAMTA was introduced into Congress by Rep. Louise Slaughter, who also happens to be a microbiologist, and therefore a qualified expert on the subject.**

Lydia Zuraw 2015 (journalist) Rep. Slaughter Reintroduces Preservation of Antibiotics Legislation FOOD SAFETY NEWS 25 Mar 2015 <http://www.foodsafetynews.com/2015/03/rep-slaughter-reintroduces-preservation-of-antibiotics-legislation/>

On Tuesday, Rep. Louise Slaughter (D-NY) reintroduced the Preservation of Antibiotics for Medical Treatment Act (PAMTA), which would ban non-therapeutic uses of medically important antibiotics in food animal production. “My legislation would save eight critical classes of antibiotics from being routinely fed to healthy animals and would reserve them only for sick humans and sick animals,” Slaughter said. “Right now, we are allowing the greatest medical advancement of the 20th century to be frittered away, in part because it’s cheaper for factory farms to feed these critical drugs to animals rather than clean up the deplorable conditions on the farm.”

B. Experts agree PAMTA is the solution. Hundreds of experts advocate PAMTA

Lydia Zuraw 2015 (journalist) Rep. Slaughter Reintroduces Preservation of Antibiotics Legislation FOOD SAFETY NEWS 25 Mar 2015 <http://www.foodsafetynews.com/2015/03/rep-slaughter-reintroduces-preservation-of-antibiotics-legislation/>

“We need this bill so that we become the leaders in the world on this issue,” said Lance Price, a professor at George Washington University’s Milken Institute School of Public Health, at the press conference. “We’re lagging behind Europe, but we need to lead the developing world because there it’s no holds barred.” Price added that PAMTA is the “only serious leadership” he’s seen on animal antibiotics. In the 113th Congress, PAMTA had 78 co-sponsors and was endorsed by 450 health, agriculture, environmental, food safety and nutrition, animal protection, religious, labor and consumer advocate groups.

C. Proven real-world success. In Denmark, farm antibiotic restrictions reduced antibiotic resistance in Danish livestock and among the Danish population, with no adverse impact on farm production

Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman 2015 (Martin – MD, MPH, MBA. Thottathil – PhD. Newman – MD, MPH) Dec 2015 AMERICAN JOURNAL OF PUBLIC HEALTH, Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638249/>

Many countries have already restricted antibiotic use in animal agriculture. In 2006, the European Union banned the use of antimicrobial growth promoters in animal food and water. Denmark, the world’s largest exporter of pork, has further restricted use of antibiotics for growth promotion and for the routine prevention of diseases caused by overcrowded and unsanitary feedlot conditions. Researchers documented a subsequent decrease in antibiotic resistance in Danish livestock and retail meat, and within the general Danish population. For example, after Denmark banned avoparcin, an antibiotic similar to vancomycin that was only used in food animal production, levels of vancomycin-resistant enterococci found in Danish livestock and humans dropped within two years. Moreover, there have been no adverse effects on Danish pork production levels because of restrictions on antibiotic use.

2A Evidence: Antibiotics

DEFINITIONS & BACKGROUND

Text of HR1552

<https://www.congress.gov/bill/114th-congress/house-bill/1552/text>

Summary of what HR1522 does

Brian Krans 2014 (journalist) (ethical note about the date: article is undated but date was inferred from events referenced in the text of the article; it was written during the sitting of the 113th Congress and refers to 2013 in the past tense) “The Politics of an Emerging Health Crisis” <http://www.healthline.com/health/antibiotics/politics-pork-and-poultry-why-legislation-has-not-passed>

Slaughter's PAMTA bill and its sister bill in the Senate have several provisions designed to preserve the effectiveness of medically important antibiotics. The bill would:  
-amend the [Federal Food, Drug and Cosmetic Act](http://www.fda.gov/regulatoryinformation/legislation/federalfooddrugandcosmeticactFDCAct/default.htm) so that drug manufacturers must prove that the nontherapeutic use of their antibiotics won't contribute to antibiotic resistance  
-phase out the nontherapeutic use of antibiotics in animal feed and water  
-prohibit the use of antibiotics in animals that aren't sick  
-make it illegal to routinely give animals antibiotics for disease prevention  
-ensure that veterinarians administering antibiotics have a valid doctor-farmer-animal relationship, and require vets to inspect animal living areas.  
"If those animals get sick, our bill says treat them," Slaughter said.

OPENING QUOTES / AFFIRMATIVE PHILOSOPHY

Antibiotic resistance is a ticking time bomb that will blow us back to the Dark Ages

NEW YORK TIMES 2015 (journalist Beth Gardiner) 19 Oct 2015 Taking on the Superbugs <http://www.nytimes.com/2015/10/20/business/energy-environment/taking-on-the-superbugs-antibiotics.html> (brackets added)

[British Prime Minister] Mr. [David] Cameron warned last year that inaction could lead to “an almost unthinkable scenario where antibiotics no longer work and we are cast back into the dark ages of medicine.” Sally Davies, England’s chief medical officer, has called drug resistance a “ticking time bomb” that ranks alongside terrorism and climate change as critical threats.

INHERENCY

Federal antibiotic restriction law (PAMTA) blocked and the new voluntary FDA guidelines aren’t effective

Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman 2015 (Martin – MD, MPH, MBA. Thottathil – PhD. Newman – MD, MPH) Dec 2015 AMERICAN JOURNAL OF PUBLIC HEALTH, Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638249/>

In the United States, progress in restricting antibiotic use in livestock has been slow at the federal level. The Preservation of Antibiotics for Medical Treatment Act (PAMTA), a bill that would phase out the use in animal feed of eight classes of medically important antibiotics—aminoglycosides, cephalosporins, lincosamides, macrolides, penicillins, streptogramins, sulfonamides, and tetracyclines—has routinely stalled in Congress. The US Food and Drug Administration has finally issued guidance documents for industry to follow in volunteering to no longer sell their antibiotic products for “growth promotion” (effective December 2016). However, the routine use of identical or nearly identical antibiotic feed additives in the same dose range to prevent disease will still be permitted.

Status Quo federal response to farm antibiotics is insufficient

Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman 2015 (Martin – MD, MPH, MBA. Thottathil – PhD. Newman – MD, MPH) Dec 2015 AMERICAN JOURNAL OF PUBLIC HEALTH, Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638249/>

In 2014, in response to recommendations from the President’s Council of Advisors on Science and Technology (PCAST), the White House released the National Strategy to Combat Antibiotic-Resistant Bacteria. Although it acknowledges the antibiotic resistance crisis, the Strategy fails to set national targets to reduce antibiotic use in animal agriculture and does not mandate the collection of antibiotic usage data. It also defers to the voluntary guidelines set by the Food and Drug Administration that allow routine use of antibiotics for disease prevention. Because the actions of federal legislators and regulators remain insufficient, it is time for the health care sector to expand its stewardship over these lifesaving drugs beyond clinical practice.

Current FDA regulations have loopholes that still allow antibiotics on the farm for non-sick animals

Rep Louise Slaughter 2015 (microbiologist; member of Congress D-NY, author of HR1552) Text of HR1552 <https://www.congress.gov/bill/114th-congress/house-bill/1552/text>

(14) A stated goal of FDA Guidance documents 209 and 213 is a reduction in the overall consumption of antibiotics. The FDA policy continues to allow the use of antibiotics for routine disease prevention without requiring evidence of the presence of a specific disease or requiring the mitigation of conditions which elevate disease risk. (15) There is inadequate distinction between usage for disease prevention and production purposes, such as growth promotion, on FDA approved drug labels. A 2014 analysis of the approved animal drugs affected by Guidance 213 by the Pew Charitable Trusts found that numerous approved drug labels contained overlapping indications for growth-promotion and disease prevention.

FDA rules aren’t enough, we need a total ban on non-therapeutic farm antibiotics

NEW YORK TIMES 2013 (journalist Sabrina Tavernise) 11 Dec 2013 “F.D.A. Restricts Antibiotics Use for Livestock <http://www.nytimes.com/2013/12/12/health/fda-to-phase-out-use-of-some-antibiotics-in-animals-raised-for-meat.html>

Some consumer health advocates were skeptical that the new rules would reduce the amount of antibiotics consumed by animals. They say that a loophole will allow animal producers to keep using the same low doses of antibiotics by contending they are needed to keep animals from getting sick, and evading the new ban on use for growth promotion. More meaningful, said Dr. Keeve Nachman, a scientist at the Johns Hopkins Center for a Livable Future, would be to ban the use of antibiotics for the prevention of disease, a step the F.D.A. so far has not taken. That would limit antibiotic uses to treatment of a specific sickness diagnosed by a veterinarian, a much narrower category, he said.

FDA guidelines contain a huge loophole: allowing use of antibiotics for disease prevention

**[FDA will allow antibiotics on healthy animals just to prevent them from getting sick, rather than only on sick animals, so pretty much leave the use of antibiotics as it is today]**

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 published by National Institute of Environmental Health Sciences “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/> (brackets in original; NRDC is Natural Resources Defense Council)

In December 2013 the agency finalized its voluntary guidelines, which ask drug companies to remove growth-promotion claims from their labels and prevent antibiotics administered in food and water from being sold over the counter for prophylactic use (such use would require a veterinarian’s prescription).[31](http://ehp.niehs.nih.gov/122-a160/#r31) “FDA is currently working in collaboration with other agencies, including the [U.S. Department of Agriculture and the Centers for Disease Control and Prevention], to explore approaches for enhancing current data collection efforts in order to measure the effectiveness” of the voluntary guidelines, says Siobhan DeLancey of the FDA Office of Media Affairs. For many public health advocates, this measure doesn’t go nearly far enough. “The voluntary approach is not likely to work,” says Avinash Kar, a staff attorney for the NRDC. “There’s a huge loophole: The FDA’s guidance endorses the use of antibiotics for disease prevention,” although it urges that such use be “judicious.”

Current regulations flawed: No specific targets, a problematic loophole, and little progress in reducing antibiotic use

Steven Ross Johnson 2016 (journalist) 4 Apr 2016 Antibiotic use in livestock still widespread in spite of 'superbug' fight MODERN HEALTH CARE <http://www.modernhealthcare.com/article/20160404/NEWS/160409951>

“The president's key advisers must take a step back and address the fundamental flaws in the current plan,” Dr. David Wallinga, senior health officer at the Natural Resources Defense Council, said in a statement. “Chief among these is the lack of a specific target for reducing antibiotics sales for use in livestock—without clear and ambitious goals, we are one step closer to a future where we can no longer count on our miracle drugs to work when we're at death's door.” Critics have argued that the prophylactic use of such drugs in livestock provides a loophole that could allow meat producers to continue to use them to make livestock gain weight without having to increase their food intake. Meat producers counter that the drugs are necessary to stave off infections that can spread quickly through livestock. The report noted some improvement in the nation's surveillance of the use of antibiotics prescribed in healthcare settings. But there has been little progress in curbing the use of antibiotics in feed animals. An estimated 62% of medicines deemed medically important for humans were sold for livestock purposes in 2014.

Farm antibiotic use is trending up

Lydia Zuraw 2015 (journalist) 28 Dec 2015 “2015 in Review: Animal Antibiotics” <http://www.foodsafetynews.com/2015/12/2015-in-review-animal-antibiotics/> (brackets added)

According the ADUFA [Animal Drug User Fee Act] [sales data from 2013](http://www.foodsafetynews.com/2015/04/62-percent-of-2013-animal-antibiotics-sales-were-medically-important-drugs/), sales of medically important antimicrobials used in food-producing animals in the U.S. increased by 3 percent in 2013 and by 20 percent between 2009 and 2013. FDA also released the [data for 2014](http://www.foodsafetynews.com/2015/12/antibiotics-sales-to-farms-up-23-percent-since-2009/) which showed another 3-percent increase in 2014 and 23 percent increase between 2009 and 2014.

“Why hasn’t Congress passed PAMTA yet?” Money, ignorance and old practices

Brian Krans 2014 (journalist) (ethical note about the date: article is undated but date was inferred from events referenced in the text of the article; it was written during the sitting of the 113th Congress and refers to 2013 in the past tense) “Politics stall antibiotics ban in Congress” <http://www.healthline.com/health/antibiotics/politics-pork-and-poultry-why-legislation-has-not-passed> (Brackets added)

The science she wants other members of the House to grasp now is that the way animals are being raised in the U.S. is helping to breed bacteria that kill Americans. She [Rep. Louise Slaughter] vows not to retire until her new bill, the [Preservation of Antibiotics for Medical Treatment Act](https://www.govtrack.us/congress/bills/113/hr1150), or PAMTA, is passed. "I'm right into it," she said. "I have to get this thing passed." The main roadblocks preventing the bill from passing, Slaughter said, are "money and ignorance and old practices."

HARMS / SIGNIFICANCE

Strong evidence and clear link between farm antibiotics and human antibiotic resistance

US Centers for Disease Control & Prevention (CDC) 2014 (federal agency, part of the Dept of Health & Human Services) last reviewed 4 Sept 2014 “Antibiotic Use in Food-Producing Animals” <http://www.cdc.gov/narms/animals.html>

Antibiotics are widely used in food-producing animals. This use contributes to the emergence of antibiotic-resistant bacteria in food-producing animals. These resistant bacteria can contaminate the foods that come from those animals, and persons who consume these foods can develop antibiotic-resistant infections. Scientists around the world have provided strong evidence that antibiotic use in food-producing animals can have a negative impact on public health through the following sequence of events:  
Use of antibiotics in food-producing animals allows antibiotic-resistant bacteria to thrive while susceptible bacteria are suppressed or die;  
Resistant bacteria can be transmitted from food-producing animals to humans through the food supply;  
Resistant bacteria can cause infections in humans; and  
Infections caused by resistant bacteria can result in adverse human health consequences.

Farm antibiotics is responsible for ½ of drug resistance globally and as much as 80% of the problem in the US

NEW YORK TIMES 2015 (journalist Beth Gardiner) 19 Oct 2015 Taking on the Superbugs <http://www.nytimes.com/2015/10/20/business/energy-environment/taking-on-the-superbugs-antibiotics.html>

Sally Davies, England’s chief medical officer, has called drug resistance a “ticking time bomb” that ranks alongside terrorism and climate change as critical threats. Agriculture is driving about half of the resistance increase globally, and could be responsible for as much as 80 percent of the problem in the United States, where the large-scale, intensive approach to food production originated, said Jim O’Neill, a former chief economist at Goldman Sachs and the chair of the British commission.

Agricultural use of antibiotics creates dangerous drug-resistant bacteria. Example: Colistin

Bill Wenzel 2016 (Antibiotics Program Director at Public Interest Research Group) 11 Jan 2016 “[THE STATE OF ANTIBIOTICS 2016](http://www.uspirg.org/blogs/blog/usp/state-antibiotics-2016)” <http://www.uspirg.org/blogs/blog/usp/state-antibiotics-2016>

A bacterial gene resistant to colistin -- an antibiotic reserved for last-case scenarios, after doctors have exhausted all other options--known as MCR-1 was discovered on a Chinese pig farm last November. Shortly after its discovery in China, the same gene was found in Denmark, then in the UK, Canada and, as of Jan 8th, France, Germany, and Vietnam. What’s worse, that colistin resistance doesn’t come alone. Recent reports suggest that the MCR-1 gene can combine with other factors to make some bacteria resistant to other potent drugs; these “multi-drug resistant bacteria” –- the ultimate superbugs -- are spreading. Researchers have shown that the emergence of this resistant gene, and its spread between animals and humans worldwide, [was largely caused by its misuse and overuse in agriculture.](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(15)00424-7/abstract) The last-resort drug was introduced to agriculture in some countries during periods of limited human use. Thankfully, the U.S. was not one of them. But in those nations that did approve colistin for agricultural use, we’re realizing the devastating repercussions that any routine use of antibiotics can, and most likely will, have. Now, “We’re watching our demise in real time,” Lance Price, PhD, microbiologist and founder of the Antibiotic Resistance Action Center at George Washington University, told National Geographic.

Farm antibiotics create human antibiotic resistance and sickness. Example: VRE

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/>

Avoparcin was approved as a growth promoter in Europe in the 1970s and was widely used in livestock.In the United States, meanwhile, avoparcin was never approved for any use in agriculture, but vancomycin was being commonly administered in hospitals, contributing to the rise of vancomycin-resistant enterococci (VRE). In hospital patients already weakened by other health problems, VRE can cause serious infections. In the United States, 20,000 hospital patients contract VRE infections each year, and 1,300 of them die.By the 1990s, VRE was much more common among the European general population compared with the U.S. population. It appears that VRE strains from livestock entered the general community in Europe whereas these strains remained restricted to hospitals in the United States.

Farm antibiotics led to human sickness with resistant bacteria: Salmonella from turkey, 2011

Consumers Union 2012 (non-profit research organization; ethical note about the date: article was undated but internally references events in 2012 and none later) “The Overuse of Antibiotics in Food Animals Threatens Public Health” <https://consumersunion.org/news/the-overuse-of-antibiotics-in-food-animals-threatens-public-health-2/>

But occasionally a superbug outbreak is serious enough to command the attention of the Center for Disease Control.  One such case occurred in 2011, in which ground turkey was linked to 136 illnesses and one death, all caused by a strain of Salmonella resistant to four different antibiotics, ampicillin, streptomycin, tetracycline and gentamicin.Some 36 million pounds of ground turkey were recalled. Another case was ground beef from the Hannaford grocery store chain in New England linked in 2011 to 19 infections and at least seven hospitalizations, all caused by a strain of Salmonella resistant to multiple antibiotics, including amoxicillin/clavulanic acid, ampicillin, ceftriaxone, cefoxitin, kanamycin, streptomycin, and sulfisoxazole.

Antibiotic resistant diseases cause 2 million sicknesses and 23,000 deaths per year in the US

US Center for Disease Control and Prevention 2013 (federal agency, part of the Dept. of Health & Human Services) Antibiotic Resistance Threats in the United States, 2013 <http://www.cdc.gov/drugresistance/threat-report-2013/index.html>

Each year in the United States, at least 2 million people become infected with bacteria that are resistant to antibiotics and at least 23,000 people die each year as a direct result of these infections. Many more people die from other conditions that were complicated by an antibiotic-resistant infection.

Antibiotic-resistant infections cause sickness, death, and $20-$35 billion/year in health care costs in the US

US Center for Disease Control and Prevention 2013 (federal agency, part of the Dept. of Health & Human Services) Antibiotic Resistance Threats in the United States, 2013 <http://www.cdc.gov/drugresistance/threat-report-2013/index.html>

Antibiotic-resistant infections add considerable and avoidable costs to the already overburdened U.S.healthcare system.In most cases, antibiotic-resistant infections require prolonged and/or costlier treatments, extend hospital stays, necessitate additional doctor visits and healthcare use, and result in greater disability and death compared with infections that are easily treatable with antibiotics. The total economic cost of antibiotic resistance to the U.S.economy has been difficult to calculate.Estimates vary but have ranged as high as $20 billion in excess direct healthcare costs, with additional costs to society for lost productivity as high as $35 billion a year (2008 dollars).

If we lose antibiotics, in addition to infections disease, we also lose joint replacement, organ transplants, cancer therapy and treatments of other diseases

US Center for Disease Control and Prevention 2013 (federal agency, part of the Dept. of Health & Human Services) Antibiotic Resistance Threats in the United States, 2013 <http://www.cdc.gov/drugresistance/threat-report-2013/index.html>

As antibiotic resistance grows, the antibiotics used to treat infections do not work as well or at all.The loss of effective antibiotic treatments will not only cripple the ability to fight routine infectious diseases but will also undermine treatment of infectious complications in patients with other diseases.Many of the advances in medical treatment—joint replacements, organ transplants, cancer therapy, and treatment of chronic diseases such as diabetes, asthma, rheumatoid arthritis—are dependent on the ability to fight infections with antibiotics.If that ability is lost, the ability to safely offer people many life-saving and life-improving modern medical advantages will be lost with it.

A/T “New / more powerful drugs can be used” – Drugs of last resort are more expensive, less effective and more dangerous to the patient

Dr.Tom Frieden 2013 (MD, MPH; Director, U.S. Centers for Disease Control and Prevention) Antibiotic Resistance Threats in the United States, 2013 <http://www.cdc.gov/drugresistance/threat-report-2013/index.html>

When first-line and then second-line antibiotic treatment options are limited by resistance or are unavailable, healthcare providers are forced to use antibiotics that may be more toxic to the patient and frequently more expensive and less effective. Even when alternative treatments exist, research has shown that patients with resistant infections are often much more likely to die, and survivors have significantly longer hospital stays, delayed recuperation, and long-term disability.

SOLVENCY / ADVOCACY

PAMTA meets the government’s obligation to stop farm antibiotic abuse

Lydia Zuraw 2015 (journalist) Rep. Slaughter Reintroduces Preservation of Antibiotics Legislation FOOD SAFETY NEWS 25 Mar 2015 <http://www.foodsafetynews.com/2015/03/rep-slaughter-reintroduces-preservation-of-antibiotics-legislation/> (brackets added)

[Rep. Louise] Slaughter, the only microbiologist in Congress, has been a co-sponsor of the bill since 1999 and the main sponsor since 2007. In a press conference Tuesday announcing her reintroduction of the legislation, Slaughter praised recent decisions by fast food restaurants such as [McDonald’s](http://www.foodsafetynews.com/2015/03/mcdonalds-to-phase-out-chicken-given-medically-important-antibiotics/) to stop feeding antibiotics to their animals, adding that “the government has a role, too, when more than 80 percent of the antibiotics used in this country are used on healthy farm animals.”

Tufts University Study: Farm antibiotics cause human antibiotic resistance, and removing them reverses the effect

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/>

The introduction of routine antibiotic use in agriculture set the stage for a global mass experiment in the evolution of drug-resistant microbes. “Low-dose, prolonged courses of antibiotics among food animals create ideal selective pressures for the propagation of resistant strains,” wrote Stuart Levy, a medical doctor and microbiologist at Tufts University, who tracked the phenomenon in a 1974 experiment on a small farm. Levy’s team found that drug-resistant bacteria quickly came to dominate the intestinal flora of chickens following the introduction of feed laced with oxytetracycline. Within six months, the people living on the farm also carried tetracycline-resistant coliform bacteria, which made up more than 80% of their intestinal microbes. The bacteria carried by both chickens and farmers contained plasmids that conferred traits creating resistance to multiple antibiotics, not only the original drug. The researchers also observed that six months after antibiotics were removed from the chicken feed, most of the workers no longer carried tetracycline-resistant bacteria.

Details on advocacy groups who recommend the plan, including the American Medical Association

Rep Louise Slaughter 2015 (microbiologist; member of Congress D-NY, author of HR1552) Text of HR1552 <https://www.congress.gov/bill/114th-congress/house-bill/1552/text>

The American Medical Association, the Infectious Disease Society of America, the American Public Health Association, the National Association of County and City Health Officials, and the National Sustainable Agriculture Coalition are among the over 400 organizations representing health, consumer, agricultural, environmental, humane, and other interests that have supported enactment of legislation to phaseout nontherapeutic use in farm animals of medically important antimicrobials.

Widespread expert advocacy for the Affirmative position

Consumers Union 2012 (non-profit research organization; ethical note about the date: article was undated but internally references events in 2012 and none later) “The Overuse of Antibiotics in Food Animals Threatens Public Health” <https://consumersunion.org/news/the-overuse-of-antibiotics-in-food-animals-threatens-public-health-2/>

A key question is, can antibiotic use in animals promote the development of hard-to-treat antibiotic-resistant superbugs that make people sick?  And if it can, are the illnesses rare occurrences, and the risks theoretical, or could current usage in animals pose a serious threat to human health. But Consumers Union has concluded that the threat to public health from the overuse of antibiotics in food animals is real and growing.  Humans are at risk both due to potential presence of superbugs in meat and poultry, and to the general migration of superbugs into the environment, where they can transmit their genetic immunity to antibiotics to other bacteria, including bacteria that make people sick. Numerous health organizations, including the American Medical Association, American Public Health Association, Infectious Disease Society of America, and the World Health Organization, agree and have called for significant reductions in the use of antibiotics for animal food production.

Evidence dates matter: Short term, if there’s no change in resistant bacteria, study it long-term and you’ll see it

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 published by National Institute of Environmental Health Sciences “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/> (brackets added)

In most cases, halting the nontherapeutic use of antibiotics in livestock leads to a significant decrease in resistant microbes in animals and meat within a year or two—as Levy’s work suggested decades ago. In other cases, depending on the drug involved and other factors, resistance can fade more slowly. “We’ve looked at this in poultry and in pig production,” says Yvonne Agersø, a senior researcher at DTU [Technical University of Denmark]. “The bacterial community in the gut of an animal or person is an extremely competitive environment. If you don’t have antimicrobials being used and creating selective pressure for resistance, you’ll get rid of that trait in the long run.”

Denmark experience was so successful, the Europe Union changed its policy too

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 published by National Institute of Environmental Health Sciences “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/> (brackets added)

[Director of the National Food Institute at Technical University of Denmark, Jørgen] Schlundt emphasizes that close monitoring of antibiotic sales and use is an essential part of the Danish system. “We started monitoring even before we introduced the restrictions on antibiotic use, so we would have baseline data,” he says. “We track the amount of antibiotics used in animals and in humans, and monitor resistance in pathogens and indicator organisms.” This information was needed both to enable the government to intervene with the few farmers who continued to overuse antibiotics, and to convince the agricultural community that the ban was effective as a public health strategy. The evidence from Denmark, and elsewhere in Europe, has been so convincing that the entire European Union banned the use of growth promoters in 2006.

DISADVANTAGE RESPONSES

A/T “Animal sickness will increase” – Denmark experience: Antibiotic use dropped over 50% and pig health improved

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 published by National Institute of Environmental Health Sciences “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/>

From 1992 to 2008, antibiotic use per kilogram of pig raised in Denmark dropped by more than 50%. Yet overall productivity increased. Production of weaning pigs increased from 18.4 million in 1992 to 27.1 million in 2008. Pig mortality began increasing in 1994 but fell sharply after 2004 and by 2008 was similar to 1992 levels.

A/T “Higher food cost” and “Animal sickness” – Denmark experience: Cost per pig went up 1 euro and had less disease

Sharon Levy 2014 (freelance science journalist) ENVIRONMENTAL HEALTH PERSPECTIVES June 2014 published by National Institute of Environmental Health Sciences “Reduced Antibiotic Use in Livestock: How Denmark Tackled Resistance” <http://ehp.niehs.nih.gov/122-a160/> (brackets added)

According to Niels Kjeldsen, a veterinarian with the Danish Agriculture and Food Council, the cost of raising pigs has gone up by about €1 per animal, from birth to slaughter, since the ban. “We have more efficient production and less disease,” says Jørgen Schlundt, director of the National Food Institute at DTU [Technical University of Denmark]. Many Danish farmers now allow piglets to stay with their mothers for a longer period, which allows them to build their immune systems naturally. Piglets separated from their mothers very early in life are much more susceptible to infection.

1. Dr. Michael J. Martin, Dr. Sapna E. Thottathil and Dr. Thomas B. Newman 2015 (Martin – MD, MPH, MBA. Thottathil – PhD. Newman – MD, MPH) Dec 2015 AMERICAN JOURNAL OF PUBLIC HEALTH, Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638249/> [↑](#footnote-ref-1)