

“The Fire Next Time”
Testimony of Jean Halloran, Policy Advisor
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To the
2021 New York Joint Legislative Budget Hearing on Higher Education
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Thank you for the opportunity to submit testimony to the Joint Legislative Budget Hearing on Higher Education. I represent the [Center for Food Safety](#), a national organization dedicated to assuring safe food and a safe environment, through legal, scientific and grassroots action.

The COVID-19 pandemic has graphically brought home to all of us how a previously unknown disease can wreak havoc not just on our lives in New York, but on human life around the world. One of the key lessons of the pandemic is the importance of prioritizing public health measures. I am testifying today with regard to a public health measure that must be prioritized in New York, and elsewhere, namely preserving the continued effectiveness of antibiotics. If we do not take action now to end antibiotic overuse, which is causing these lifesaving drugs to become ineffective, we will almost certainly face a new public health crisis, the impact of which could equal or even exceed that of the current pandemic.

The Higher Ed Committee has a critical role to play in preserving the efficacy of antibiotics by virtue of its role regulating the practices of veterinarians. Veterinarians, especially those who deal with food animals, are key stewards of antibiotics. Two-thirds of all medically important antibiotics are sold for use in animals. Following guidelines established by the US Food and Drug Administration, veterinarians prescribe when and where antibiotic drugs can be administered or fed. Those federal guidelines, however, are weak.

Therefore, we urge you to take direct action now against one of the main causes of antibiotic resistance – the misuse and overuse of medically important antibiotics in animal agriculture. The more antibiotics are used, the quicker bacteria evolve into dangerous superbugs. We therefore ask you to incorporate into this year’s State Budget the language of A.9632 (L. Rosenthal) / S.2871 (Kavanagh), which prohibits the use of medically important antibiotics in food-producing animals for the purposes of disease prevention (except in very limited circumstances) and allows use *only* for treatment of sick animals and for certain medical procedures. While the bill has budget implications for New York State, they are modest, involved mostly in enforcement and recordkeeping, and very minor compared to the potential public health benefits.

Here are the facts: In the U.S., approximately 65 percent of medically important antibiotics, i.e., those that are important for human medicine, such as tetracycline and penicillin, are also sold for use in food animals – cattle, pigs, turkeys, chickens – typically raised in large-scale industrialized operations, but on smaller farms, too. Surprisingly, most of the animals getting antibiotics aren’t actually sick. Instead, antibiotics are routinely administered to the animals at subtherapeutic levels daily, mixed into their food and/or water, so that they can survive their often unsanitary and overcrowded living conditions and unnatural diets. Healthy dairy cows may get antibiotics in the “drying out” period, even though other methods of preventing mastitis, which sometimes occurs in this period, have been developed by Cornell University among other institutions. Moreover, despite increasing awareness of the antibiotic-resistance crisis, after a promising decrease in usage in 2017 when new FDA guidance went into effect, recent FDA reports show the sale and use of medically important antibiotics in animals is trending

upward, increasing 3% from 2017-2018, and another 3% from 2018-2019. This is movement in the wrong direction.

Blanket use of antibiotics on entire populations of animals creates the perfect conditions for the evolution of bacteria that are resistant to those same antibiotics. While antibiotic resistance is a naturally occurring phenomenon, the speed of its evolution is pushed into hyperdrive when bacteria are repeatedly exposed to antibiotics as they are in modern farming. The antibiotics kill off the bacteria that don't have resistance, but the bacteria that already have a mutation or gene that makes them resistant will survive, multiply, and spread. Disease causing bacteria can become superbugs.

Antibiotic-resistant bacteria that originate in farm settings don't stay there -- they travel easily from farms to people. They can contaminate the food we eat, the air we breathe, and the water we drink. They can spread easily between people via direct contact, coughing, sneezing, poor hygiene, and sharing of personal items. Antibiotic-resistant bacteria can transfer their resistance to other bacteria, e.g., those in the human gut, making gut bacteria resistant to medically important antibiotics, too. If there is one thing we have learned from the pandemic, it is that disease-causing organisms spread like wildfire. We need all the tools we can have to fight them, and antibiotics are critical tools. Due to overuse, however, antibiotics, are in danger of losing their effectiveness.

The World Health Organization, the United Nations General Assembly, the U.S. Centers for Disease Control and Prevention, the New York State Department of Health, and many other public health organizations have identified antibiotic-resistant infections as a grave threat to human health. Antibiotic-resistant bacteria are currently estimated to be responsible for at least 2.8 million infections in the U.S. and as many as 162,000 deaths annually, though experts believe the actual numbers are much higher. But these numbers could get much worse. A U.K. government-sponsored study predicted 10 million deaths per year worldwide by 2050 – more than from cancer – if action is not taken now. This prediction was made before the COVID-19 pandemic, during which desperate doctors around the globe liberally dispensed broad-spectrum antibiotics, believing that sick COVID-19 patients were highly susceptible to secondary bacterial infections. While only a small fraction of COVID-19 patients get secondary bacterial infections, experts believe this widespread use of broad-spectrum antibiotics has likely spurred the development of more antibiotic-resistant bacteria.

Although antibiotics overuse in medical settings is the primary contributor to antibiotic resistance, use in animals, accounting for two-thirds of all antibiotic sales annually in the United States, is also a major driver. This can have both a direct and an indirect impact on people. The CDC estimates that approximately 661,000 Americans get sick each year by eating food contaminated with antibiotic-resistant bacteria and that 24% of all antibiotic-resistant infections are caused by germs from food and animals. Unchecked, the growing threat of antibiotic resistance will lead to a world where strep throat, tuberculosis, childbirth, UTIs, tooth infections, skin scrapes, and routine surgery will once again come with a high death risk, as they did before the discovery of antibiotics 100 years ago.

Given these high stakes – and the lack of effective regulation at the federal level – it's up to states to help save antibiotics for humans now and in the future and deflect another looming public health crisis. California and Maryland recently passed laws restricting the use of antibiotics in farm animals. New York should join them in leading the fight against antibiotic resistance by instituting a ban on the use of antibiotics in food-producing animals for the purposes of disease prevention. The Higher Ed Committee should act to ensure that veterinarians only prescribe antibiotics to those animals that are sick (e.g.,

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dairy cows with mastitis), or in certain circumstances to control the outbreak of disease from a contagious animal(s), or in relation to certain medical procedures (e.g., surgery, castration).

The song goes, “God gave Noah the rainbow sign, No more water, the fire next time.” Applied to our current circumstance, we could say “No more covid, its bacteria next time”. But we have a chance to avert that disaster, and a critical part of that is to end use of antibiotics for blanket disease prevention in food animals.