

Summary of Statement by Jay P. Graham, PhD, MBA
Research Fellow at the Johns Hopkins Bloomberg School of Public Health
Senate Health, Education, Labor and Pensions Committee

The declining effectiveness of antimicrobials often centers on antimicrobials used in human medicine. Most antimicrobials in the U.S., however, are used as “growth promoters” in food animal production, not human medicine. This constant supply of antimicrobials fed to food animals is particularly effective in driving the selection of resistant strains of bacteria, in terms of reproduction and spread. And, because of the rapidity of bacterial reproduction, these changes can be expressed with great efficiency.

Exacerbating the problem of using antimicrobials for growth promotion of food animals is the fact that bacteria can share genetic material that encodes resistance to antimicrobials. It is estimated that transferable resistance genes account for more than 95% of antibiotic resistance.

Drug resistant bacteria can affect the public through food routes and environmental routes. In the U.S., resistant bacteria are highly prevalent in meat and poultry products, including disease-causing bacteria that are resistant to the broad-spectrum antimicrobials penicillin, tetracycline and erythromycin.

The actual economic benefits of using antimicrobials in animal feeds have recently been shown to small to non-existent. Even when improvements from growth promoting antimicrobials have been observed, their benefits are completely offset if costs from increased resistance are considered: loss of disease treatment options in humans and animals, increased health care costs, and more severe and enduring infections. These costs are generally paid by society and not captured in the price of the meat and poultry sold to consumers.

The American Public Health Association, the world’s largest public health organization, has stated, “the emerging scientific consensus is that antibiotics given to food animals contribute to antibiotic resistance transmitted to humans.”

Prudent public health policy indicates that antimicrobials used for growth promotion purposes in food animal production should be ended.