The Science is Clear: Antibiotic Use In Livestock Feed Must Stop

By Josh Bloom — December 30, 2015

Dr. David Shlaes, my former colleague at Wyeth, is one of the world's premier experts in antibiotic research and development. Dr. Shlaes is also an advisor at the American Council on Science and Health. He and I have co-written a piece titled "Stop Giving Antibiotics to Cows, Pigs, and Chickens Now," [2] that was just published in STAT- a science and health site that is a partner of the Boston Globe. This issue is both timely and critical.

As antibiotic resistance continues to rear its ugly head across the globe, scientists and public health officials are finally beginning to agree about the use of low dose antibiotics as growth promoters in livestock feed: It needs to stop immediately. Any lingering doubts about the contribution of this practice to the proliferation of bacterial resistance was put to bed by recent, troubling reports about the appearance of a new gene [3] in both pigs and humans in China.

The mrc-1 gene is responsible for generating resistance to the polymyxin class of antibiotics, which although in imperfect in many ways, is currently the last line of defense against infections that fail to respond to other antibiotics. One such infection is carbapenem-resistant Enterobacteriaceae (CRE), which has a mortality rate of about 50 percent in hospitalized patients who become infected.

The nightmare scenario the emergence of CRE strains that have also acquired polymyxin resistance has already begun. Although it is mostly confined to China, these “unkillable” strains are being found in other areas.
It is no coincidence that this new resistance mechanism arose in China, or that it was found in pigs, since polymyxin antibiotics are routinely used as growth promoters in pigs that country. Yet, according to the FDA, this suicidal practice is not confined to China. It is also going on in the US. Before we start lecturing the Chinese about their livestock practices, we had better get our own under control.