Does Antimicrobial Stewardship Begin at the Dinner Table?

To the Editor—Waters et al [1] are to be congratulated for their work characterizing and profiling *Staphylococcus aureus* found in commercially available meat purchased throughout the United States. This study found that ~50% of retail beef, pork, and poultry products are contaminated with *S. aureus*, and 96% of these isolates were resistant to at least 1 antibacterial agent relevant in human medicine. These data add to the collective repository linking antibacterial administration in the animal-raising industry to creating reservoirs of drug-resistant bacteria and the transmission to humans [2–4]. Antibacterials are administered to livestock and poultry in large-scale factory farms to decrease incidence of illness arising from crowding and poor sanitation and to promote growth, which increases profitability and decreases consumer costs [5, 6].

At present, the focus of antimicrobial stewardship activities is education and judicious use of antibacterials in humans. However, human medicine accounts for <50% of all antibacterial use, and efforts in humans to optimize antibacterial administration are insufficient to abrogate the upward trend of antibacterial resistance [7]. The largest nonhuman antibiotic use is in large-scale food animal production. One answer to this problem is to mandate livestock and poultry production for human consumption without overuse of antibacterials. This may be achieved through legislation, as demonstrated by a World Health Organization study evaluating the effect of banning antibiotic additives added to feed for cattle, chickens, and swine in Denmark [8]. This antibiotic ban resulted in >50% reduction in antibiotic use, leading to decreased production of bacterial resistance without dramatically affecting consumer prices.

Uniquely, the consumer has the potential to promote antimicrobial stewardship by selectively purchasing meat from livestock and poultry raised without the use of antibacterials [9]. Mandating strictly regulated labeling that details antibiotic administration empowers consumers to make educated purchases and places selective pressure on producers overusing antibiotics. At present, consumers rely on manufacturer self-promotion to educate consumers, which has been criticized for inaccuracy [10]. Promoting the consumption of meat and poultry raised without the administration of antibacterials has the potential to minimize creation and transmission of drug-resistant bacteria and to reduce the overall use of antibacterials, which
are core principles of antimicrobial stewardship.

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