

Talking Points – Response to article, “Residential Proximity to Large Numbers of Swine in Feeding Operations Is Associated with Increased Risk of Methicillin-Resistant *Staphylococcus aureus* Colonization at Time of Hospital Admission in Rural Iowa Veterans”

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FOR RESPONSE-ONLY

Background

This study sampled rural Iowa veterans for nasal Methicillin-Resistant *Staphylococcus Aureus* (MRSA) status at the time of their admission to the Iowa City Veterans Affairs Health Care System (IC-VAHCS).

Regarding the study...

- This is an observational study. Therefore, the association proposed by the authors does not prove a cause-and-effect relationship.
- This study has several shortcomings, acknowledged by the authors, which limit the findings to hypothesis-generating. The study, therefore, does not establish any credible association that living near swine facilities constitutes any real risk to residents.
 - The specific strain of MRSA (livestock-associated strains versus human-associated strains) was not reported in the study.
 - The CDC has not observed a single case of livestock-associated MRSA in its nationwide surveillance. According to the agency, more severe, life-threatening MRSA infections occur most frequently in healthcare settings due to human-associated strains of MRSA.
 - The results of the study could be biased because it did not account for several factors known to be associated with MRSA carriage, such as socioeconomic status, co-illnesses, and other healthcare-related exposures.
- The study did not find a significant difference in MRSA colonization of veterans with swine exposure versus veterans with no exposure to swine within a one-mile radius of their household. The authors only identified a significant difference in MRSA colonization when they further categorized the exposure group into high versus low swine exposure.
 - It should be noted that colonization is not infection and, therefore, does not denote illness.
 - MRSA is a bacterium found in the nasal passages and on the skin of humans, pigs and other animals. Some people and animals also carry MRSA without any negative effects on their health.
- Finally, this paper does not measure antibiotic use in animals, nor antibiotic residues in manure. Therefore, no conclusion can be made about antibiotic use related to public health.

Regarding MRSA...

- *Staphylococcus aureus* is a common bacterium found on the skin of people (30% of the population) and animals. MRSA is a bacterium found in the nasal passages and on the skin of humans, pigs and other animals. Some people and animals also carry MRSA without any negative effects on their health.
- According to the CDC, more severe, life-threatening MRSA infections occur most frequently in healthcare settings due to *human-associated* strains of MRSA. According to the CDC, the agency has not observed a single case of livestock-associated MRSA in its nationwide surveillance.
- The pork industry has been very involved in studying the livestock-associated MRSA. The Pork Checkoff has funded several research studies that have been published in scientific journals.
- The pork industry works closely with public health agencies to address public health concerns. It is our responsibility to not only produce safe and nutritious food, but to also protect public health as well as the health of the farmers who raise pigs.

Regarding antibiotics...

- Antibiotics are administered to livestock to protect their health and welfare, which helps ensure food safety and human health.
- Farmers work closely with veterinarians to develop a comprehensive herd health program, which may include antibiotics.
- The U.S. Food and Drug Administration (FDA) approves antibiotics for use in food animals, which may be used to treat illness and prevent disease, which allows them to grow better on less feed, resulting in less waste.
- The Pork Quality Assurance® Plus certification program provides good production practices for producers that reinforce the responsible use of antibiotics.