Are backyard poultry flocks at greater risk of HPAI?
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The risks of pandemic avian influenza have been of major international concern for both public health and veterinary medicine since 1999, with the detection of the current strain of H5N1 HPAI in Hong Kong. Since that times, outbreaks have spread though Asia, Europe, and Africa. Over 250 persons have been infected and millions of domestic poultry have been culled to prevent spread of disease. Current policies in public health and veterinary medicine are largely based on the assumption that backyard flocks of chickens, ducks, and geese are most vulnerable to infection, and that persons contacting these flocks are most likely to be infected. However, these assumptions have not bee rigorously examined. A close examination of current practices in confined animal feeing operations (CAFOs) for quail and broiler or layer chickens indicates that pathogens can readily enter and exit houses. Biosecurity is also compromised by the need for ventilation, lack of worker protection, and uncontrolled waste management (which includes use of poultry house waste in aquaculture). Data from outbreaks in Hong Kong and the Netherlands indicate that poultry workers and veterinarians in commercial confined poultry operations are at highest risk of infection. We have analyzed data from the 2004 surveillance program of poultry operations carried out in Thailand. The results indicate that commercial scale quail and chicken operations were substantially more likely to experience HPAI outbreaks and infections, as compared to backyard flocks of chickens, ducks, or geese. These results should influence plans for avian flu prevention and containment.

Biography:

Jay Graham, MBA, MPH is currently a Doctoral Candidate in the Department of Environmental Health Sciences at Johns Hopkins Bloomberg School of Public Health. Prior to entering the PhD program, Jay worked at the University of Texas at El Paso, where he specialized in the planning, management, and evaluation of environmental health research and outreach projects on the U.S.-México border. His current work includes research on antibiotic resistance in the poultry production environment as well as policy research related to food-animal waste management and biosecurity measures at animal feeding operations.