

## Understanding swine producers' and veterinarians' biosecurity perception and practices: a scoping review

Isha Agrawal<sup>1</sup>, Erin Kerby<sup>1</sup>, Corinne Bromfield<sup>2</sup>, Csaba Varga<sup>3</sup>

<sup>1</sup>University of Illinois Urbana Champaign, <sup>2</sup>University of Missouri, <sup>3</sup>Department of Pathobiology, University of Illinois at Urbana-Champaign.  
[ishaa3@illinois.edu](mailto:ishaa3@illinois.edu)

### Objective

Swine infectious diseases continuously pose a threat to the health and productivity of swine and the economy of the swine industry worldwide. Swine farms can be protected against the introduction and spread of endemic and foreign animal diseases by adopting effective biosecurity practices. Implementation of biosecurity systems can be influenced by the disease risk perception of swine producers, veterinarians, and other swine industry stakeholders. However, despite significant advances made in swine biosecurity over the last few decades, some swine producers do not see biosecurity as an important component of disease prevention. This proposed study aims to comprehensively review the existing literature on the biosecurity perception, knowledge, and practices of swine producers and veterinarians. In addition, we propose a thorough evaluation of the research methodology adopted to conduct these studies worldwide.

### Methods

We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) framework for this scoping review. Five bibliographic databases were used to conduct a comprehensive search. Reference screening of screened full texts articles was conducted to identify any missed articles. A multi-stage screening process was followed. Two authors created and pretested two independent forms for the abstract screening and review characterization. The abstract and full-text screening was performed by a single reviewer using those forms.

### Results

A total of 435 articles were identified based on the relevance screening criteria of their title. Of these, 216 duplicates were excluded. The remaining 219 articles will undergo abstract screening and analysis.

### Conclusions

The results from this study can be used to develop a more effective biosecurity plan and scoring system and can guide animal health policymakers to improve disease prevention.

### Financial Support

U.S. Department of Agriculture, Animal and Plant Health Inspection Services

### Notes: