

Gathering evidence – availability of published information to support zoonotic pathogen prioritization in swine within the Canadian context

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Efforts to implement control programs for zoonotic pathogens at the farm level are ongoing. However, establishing control programs for pathogens that may derive from multiple food-animal sources and for which there are interventions at various levels of the food chain can be challenging. Prioritizing pathogens for control programs should be based on scientific evidence and transparent decision-making processes. As part of a larger project applying multi-criteria decision analysis for prioritizing pathogens, a systematic review of the literature is being conducted with initial focus on existing published research on the prevalence of 15 zoonotic pathogens in swine populations and in humans, as attributable to swine and pork, within the North American context. These pathogens were selected from the Canadian Quality Assurance Program® list of food safety pathogens and through consultation with Canadian and international swine experts. A replicable search strategy was conducted. Structured and transparent relevance screening tools were used to categorize potentially relevant abstracts by pathogen, population, prevalence / diagnostic test evaluation / intervention investigation focus, and continent. Over 26,000 references were identified, screened for relevance and categorized by two independent reviewers. A format for presenting prevalence profiles is being developed and will be presented. The profiles, populated with a summary of published evidence underpinning prevalence in swine in North America for each of the pathogens, and for reports of human infection linked to swine/pork, will also be presented and discussed. The practicality of utilizing this approach for synthesis of evidence for use in formal decision making tools will be discussed, including the usefulness of maintaining ongoing databases with relevant available information. While expert consultation presents one option for prioritizing the focus of control programs, evidence synthesis tools that can be integrated into a transparent decision making framework may allow for updating decisions as new information becomes available.

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