

Contributing to a One-Medicine Approach: Cross-Species Disease Surveillance**Presenter:** Loren Shaffer, Ohio State University**Session:** Oral**Date/Time:** Tuesday, April 24; 11-12PM

Most emerging infectious pathogens are zoonotic, capable of causing disease in multiple species and often transmitting disease from one species to another. The detection of zoonotic outbreaks has frequently relied on the identification of human cases. Many consider veterinary information critical to our ability to detect outbreaks earlier. Earlier detection might lead to earlier intervention that greatly limits the morbidity and loss. The utility of veterinary data sources remains unknown. Integration of these data with those from humans also remains a challenge. We completed a retrospective study of microbiology orders from two veterinary diagnostics laboratories to establish the potential gain in timeliness and animal representation, evaluate the ability to determine baseline models, and investigate the potential of discovering microorganism-specific increases by analyzing the aggregate count of orders. The results of this preliminary study justified a follow up investigation using laboratory orders in a prospective surveillance system in an effort to detect unexpected increases and possible outbreaks of disease. The results from these studies indicate the value of veterinary diagnostic laboratory orders for early outbreak detection, demonstrate the design and operation of a prospective system, and provides for a case study where alert of an outbreak in pet animals preceded detection of an outbreak in humans by three weeks.

Biography:

Loren Shaffer, MPH, is a doctoral candidate at The Ohio State University. His research interests have focused on developing early outbreak detection methods for use in animal populations and integrating early event analysis in animals with early event analysis in humans. He is also the Early Event Surveillance Supervisor for the Ohio Department of Health and is involved in efforts to improve the detection capabilities for influenza-like illness and develop early event protocols for use by local health department personnel. He is a former Special Operations Preventive Medicine Officer and received his MPH from The Ohio State University.
