Animals as early detectors of bioevents: veterinary tools and a framework for animal-human integrated zoonoses surveillance

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Background: The threat of bioterrorism and emerging infectious diseases has prompted public health agencies to recommend enhanced surveillance activities to supplement existing surveillance plans. The majority of these biological threats are zoonotic. Animals live in close proximity to humans, are clinically more sensitive to certain biological agents, and their use as clinical sentinels for the early detection of zoonotic infectious diseases is warranted.
Objective: This presentation outlines design methods for a local integrated zoonotic surveillance plan. The project includes materials developed for veterinarians to assist in early detection of bioevents.
Methods: Research of the scientific and medical literature; policies and regulations; surveillance guidelines; and existing surveillance plans was performed. A pilot study consisting of interviews and surveys of stakeholders was performed.
Results/Discussion: Zoonotic threats from the CDC's Potential Bioterrorism Agent list and highly pathogenic influenza viruses are the selected agents included in this project. The framework is a guidance plan for local health departments to augment current human health surveillance activities, with emphasis on collaboration and cooperation between agencies at the state and local levels, as well as increased awareness in the veterinary sector of diseases rarely encountered.
Conclusion: Zoonotic surveillance in the United States is currently compartmentalized. This factor serves as a barrier to broader public health objectives. Co-analysis of animal and human disease may enhance detection of infectious disease events and help monitor the scope of an epidemic. To rapidly detect and respond to bioevents, collaboration and cooperation between agencies at the federal, state and local levels must be enhanced and maintained.

Biography:

Diane M. Gubernot received her Bachelor's in Biological Sciences from Rutgers College, New Brunswick, NJ in 1990. In May, 2006, she received her Masters in Public Health from George Washington University, School of Public Health and Health Services, Washington, DC. Ms. Gubernot is a Senior Regulatory Scientist in the Division of Emerging and Transfusion-Transmitted Diseases, Office of Blood Research and Review, Center for Biologics Evaluation and Research, U.S. Food and Drug Administration. She has been employed by the FDA since 1990. This research project was completed in partial fulfillment of the requirements for the Master in Public Health degree from GWU; this work is not FDA-related. Ms. Gubernot is currently pursuing a degree in veterinary technology with an emphasis on exotic and small animal health care. Research interests include the epidemiology of blood-borne pathogens and zoonoses, as well as ecological medicine.