

Coordinating Zoonotic Disease Surveillance: Partnering Agriculture and Public Health

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Both within the United States and abroad, veterinarians and human health care professionals recognize the need to improve collaborations among organizations within agriculture and public health sectors. The increasing frequency of outbreaks of emerging and re-emerging zoonoses (SARS, monkey pox, West Nile virus, Nipah, etc.) have heightened the public's awareness of zoonotic diseases and have resulted in a number of specific mandates directing better cooperation between government agencies. Recent policy reforms include the 2001 Animal Health Safeguarding Review¹, the 2002 Public Health Security and Bioterrorism Act², and Homeland Security (DHS) Presidential Directives 5-10³, all of which call for an integration of agriculture, public health, and food safety surveillance in order to increase the Nation's ability to defend against both natural and intentional disease threats. In addition, the World Health Organization's technical report "Future Trends in Veterinary Public Health"⁴ and the article "Converging Issues in Veterinary and Public Health"⁵ underscore the mutual needs and benefits of developing and strengthening the partnership between veterinary medicine and human health care.

During 2002, a Centers for Disease Control (CDC)-Food and Drug Administration (FDA)-U.S. Department of Agriculture (USDA) Working Group was created and tasked to address coordination of human and animal disease surveillance systems. This group is currently working to (1) identify needed elements and essential partners; (2) develop a system of communication and triggers for action; (3) divide the workload to maximize efficiency and identify roles and responsibilities; and (4) incorporate animal health surveillance into existing systems. The Interagency Working Group for the Coordination of Zoonotic Disease Surveillance (IWGCZDS) was re-energized during 2004 with the appointment of dedicated staff at CDC (Dr. Nina Marano, Associate Director for Veterinary Medicine and Public Health) and Veterinary Services (VS) (Dr. Tracey Lynn, epidemiologist, National Surveillance Unit). Currently, the IWGCZDS membership includes representatives from VS (Drs. Tracey Lynn and Tom Gomez), CDC, FDA, the National Assembly of State Animal Health Officials (Dr. Lee Myers, GA), and the National Association of State Public Health Veterinarians. Our vision is to integrate human and animal health surveillance at State, national, and global levels, building on current infrastructure and developing new strategies.

Currently, the IWGCZDS is gathering information on current efforts at the State and Federal levels, and developing a list of objectives and timelines. One of the first efforts is a survey, developed and administered in partnership with the United States Animal Health Association, of all State agriculture and public health veterinarians. This survey will provide a better understanding of current reporting and response methods and jurisdictional complexities at the State level. The IWGCZDS plans to utilize the survey's results to develop examples of "best practices" among agriculture and public health departments. In addition, the IWGCZDS intends to utilize bioterrorism preparedness

exercises, such as TOPOFF 3⁶, to identify obstacles to coordinating efforts and share the “lessons learned.”

Various laboratory networks—the National Animal Health Laboratory Network (NAHLN), the Laboratory Response Network (LRN), and the Food Emergency Response Network (FERN)—represent a very promising potential for coordinating zoonotic disease surveillance. A USDA-coordinated network of Federal and State veterinary diagnostic laboratories, NAHLN is being developed to conduct targeted surveillance for early detection of disease outbreaks and to ensure rapid and sufficient laboratory capacity in response to animal health emergencies. The LRN is a CDC-coordinated network of Federal and State laboratories, which is working to expand its membership to include one animal disease diagnostic laboratory in each State for bioterrorism preparedness and integrated response capacity to other public health emergencies. The FERN, coordinated jointly by FDA and the Food Safety Inspection Service, is a national network of food-testing laboratories designed to integrate the detection of threat agents in the food supply. The NAHLN, LRN, and FERN are working to maximize efficiencies between the three networks, and together represent a cornerstone in the development of comprehensive agriculture, public health, and food safety monitoring systems.

Professionals within public health and agriculture face many challenges as they begin integrating agriculture, public health, and food safety surveillance. Multiple, poorly coordinated surveillance systems, confidentiality issues, and funding disparities are examples of major obstacles that must be overcome. To date, there has not been an overall evaluation of the effectiveness and efficiencies of the various surveillance systems already in existence, leading to duplication of efforts and inefficient use of limited resources. There is little linking of veterinary and human data, and not all zoonotic organisms are well addressed by existing surveillance systems. Surveillance for emerging infections in wildlife is especially problematic. Few diseases are notifiable, and measures for the detection of human and livestock infections are inadequate for the identification of similar diseases in wildlife. In addition, there is no action plan for events that would trigger a response, and no definition of roles and responsibilities of the different agencies and stakeholders. The mission of the IWGCZDS is to fully identify obstacles and possible solutions, and implement the most effective methods to incorporate nontraditional partners into a coordinated system of surveillance for detection of zoonotic diseases.

For more information on the Interagency Working Group for the Coordination of Zoonotic Disease Surveillance (IWGCZDS), contact Dr. Tracey Lynn at Tracey.V.Lynn@aphis.usda.gov or 970-494-7597.

¹Animal Health Safeguarding review (2001)
Available from <http://www.nasda-hq.org/ASGRwebsite/Index.pdf>, accessed May 3, 2005

²2002 Public Health Security and Bioterrorism Act
available from <http://www.fda.gov/oc/bioterrorism/bioact.html>, accessed May 3, 2005

³ Homeland Security Presidential Directives 5-10, Available from <http://www.fas.org/irp/offdocs/nspd/>, accessed May 3, 2005

⁴ WHO Technical Report “Future Trends in Veterinary Public Health”, Available from http://whqlibdoc.who.int/trs/WHO_TRS_907.pdf, accessed May 3, 2005

⁵ King L, Khabbaz R. Converging issues in veterinary and public health. *Emerg Infect Dis* [serial online] 2003 Apr [May 3, 2005]. Available from: URL: <http://www.cdc.gov/ncidod/EID/vol9no4/03-0037.htm>

⁶ Information on the Department of Homeland Security’s TOPOFF 3 exercise available from http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0588.xml, accessed May 3, 2005