ANIMAL HEALTH AT THE CROSSROADS – FINDINGS FROM A NAS STUDY SUGGEST A NEW FRAMEWORK

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Assessing the Nation’s Animal Health Infrastructure
Assessing the Nation’s Animal Health Infrastructure

The study was commissioned based on the rapidly changing nature and impacts of disease due to:

• Global trade and travel
• Intensification of agriculture
• Blurring of rural-urban boundaries
• Growing interfaces with public health, wildlife, economies
• Emerging diseases (SARS, WNV, AI)
• Threat of bioterrorism
Envisioned as a 3-phase analysis of the U.S. framework to support animal health:

1) Prevention, Detection, Diagnosis
2) Surveillance and Monitoring
3) Response and Recovery
Assessing the Nation’s Animal Health Infrastructure:  
Committee Members: Phase 1

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# Expert Testimony and Review

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<th>Affiliation</th>
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Foreign Animal (Trans-boundary) Diseases
  • *Foot-and-mouth disease, exotic Newcastle disease*

Emerging, Recently Emergent Diseases
  • *SARS, Monkeypox, Bovine Spongiform Encephalopathy*

Endemic Diseases
  • *West Nile virus, Chronic Wasting disease, avian influenza*

Novel and bioengineered pathogens

Biothreat scenarios
Recommendation 1: The nation should establish a high-level, centralized, authoritative, and accountable coordinating mechanism or focal point for engaging and enhancing partnerships among local, state, and federal agencies and the private sector.
Recommendation 2: Agencies and institutions—including USDA and DHS—responsible for protecting animal industries, wildlife, and associated economies should encourage and support rapid development, validation, and adoption of new technologies and scientific tools for the detection, diagnosis, and prevention of animal diseases and zoonoses.
Recommendation 3: The animal health laboratory network should be expanded and strengthened to ensure sufficient capability and capacity for both routine and emergency diagnostic needs, and to ensure a robust linkage of all components (federal, state, university, and commercial laboratories) involved in the diagnosis of animal and zoonotic diseases.
Recommendation 4: Federal agencies involved in biomedical research (both human and veterinary) should establish a method to jointly fund new, competitive, comprehensive, and integrated animal health research programs; ensure that veterinary and medical scientists can work as collaborators; and enhance research, both domestically and internationally, on the detection, diagnosis, and prevention of animal and zoonotic disease encompassing both animal and human hosts.
Recommendation 5: To strengthen the animal health and zoonotic disease research infrastructure, the committee recommends that competitive grants be made available to scientists to upgrade equipment for animal disease research and that the nation construct and maintain government and university biosafety level 3 (BSL-3 and BSL-3 Ag) facilities for livestock (including large animals), poultry, and wildlife.
Recommendation 6: The United States should commit resources and develop new shared leadership roles with other countries and international organizations in creating global systems for preventing, detecting, and diagnosing known and emerging diseases, disease agents, and disease threats as they relate to animal and public health.
Recommendation 7: Integrated and standardized regulations should be developed and implemented nationally to address the import, sale, movement, and health of exotic, non-domesticated, and wild-caught animals.
**Recommendation 8:** The U.S. Department of Agriculture, Department of Homeland Security, Department of Health and Human Services, and state animal and public health agencies and laboratories should improve, expand, and formalize the use of predictive, risk-based tools and models to develop prevention, detection, diagnostic, and biosecurity systems and strategies for indigenous, exotic, and emerging animal diseases.
Assessing the Nation’s Animal Health Infrastructure:  
*Education and Training*

**Recommendation 9:** Industry, producers, the American Veterinary Medical Association, government agencies, and colleges of veterinary medicine should build veterinary capacity through both recruitment and preparation of additional veterinary graduates into careers in public health, food systems, biomedical research, diagnostic laboratory investigation, pathology, epidemiology, ecosystem health, and food animal practice.
Recommendation 10: The USDA, state animal health agencies, the American Veterinary Medical Association, and colleges and schools of veterinary medicine and departments of animal science should develop a national animal health education plan focusing on education and training of individuals from all sectors involved in disease prevention and early detection through day-to-day oversight of animals.
Assessing the Nation’s Animal Health Infrastructure: 
*Improving Public Awareness of the Economic, Social, and Human Health Effects of Animal Diseases*

**Recommendation 11:** The government, private sector, and professional and industry associations should collectively educate and raise the level of awareness of the general public about the importance of public and private investment to strengthen the animal health framework.
Assessing the Nation’s Animal Health Infrastructure:  
*Animal Health at the Crossroads*

“Given the changing nature of the risks with which the framework must cope, it is unlikely that the current philosophy on how to protect animal health will be adequate in the future. The risks of animal disease must be dealt with in a broader context that includes anticipating the emergence and spread of disease on local and global scales and recognizing relationships between animal disease, human health, and the environment.”

“Good players skate to where the puck is, great players skate to where the puck is going to be.” - Wayne Gretsky