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Implementing one health strategies to respond to emerging infectious diseases

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The ongoing outbreak of H5N1—commonly called bird flu—and more recently H7N9 and H10N8 serve as strong reminders that people, animals and the environment are inextricably linked. Emerging Infectious Diseases (EIDs) are those new, reemerging or drug-resistant infections whose incidents in people have increased in recent years or threaten to increase in the near future. Zoonotic diseases are those diseases that can be transmitted from animals to humans or from humans to humans. As much as 75% of all emerging human infectious diseases are zoonotic. Nonetheless, human and veterinary health professionals fail to acknowledge and understand the interconnectedness of human and animal health. The effective treatment, control and eradication of these diseases require an understanding of the interconnectedness of humans, animals and the environment.

The most successful and dramatic examples of real change come from committed individuals—not institutions. Actions that individuals, educators, physicians or researchers can take to save lives and prevent disease include:

- Share One Health concepts with friends and colleagues
- Educate policymakers
- Develop productive relationships with local, regional, and global interdisciplinary professionals to:
 - Share surveillance/laboratory data
 - Discuss unusual cases
 - Cooperate on training, planning and response
- Develop curriculums that include interdisciplinary courses
- Broaden research teams to include researchers from other disciplines
- Target surveillance efforts in areas with social or land use changes
- Host regional interdisciplinary working groups
- Involve cross-discipline epidemiologist when investigating disease clusters
- Develop joint interagency communication strategies

Biography

Gary Flory is currently the Agricultural Program Manager at the Virginia Department of Environmental Quality (DEQ). In this role Gary provides leadership on numerous issues surrounding the nexus of agriculture, the environment and public health. He gained extensive disease response experience during the 2002 avian influenza outbreak in Virginia and managed disposal and was operations chief during avian influenza outbreaks in West Virginia and Virginia in 2007. He has consulted, written guidance, conducted research and given presentations to national and international audiences on One Health, CBRNe preparedness, emerging infectious diseases, carcass disposal, humane depopulation, agroterrorism, and foreign animal diseases. Gary recently gave the presentation, "The Threat of Agroterrorism and Zoonotic Diseases in Asia" at Non Conventional Threat CBRNe Asia 2013 in Kuala Lumpur, Malaysia. Gary participates in a variety of working groups including the Virginia Poultry Disease Taskforce, Virginia Agroterrorism Taskforce, Texas Veterinary Medical Association's One Health Taskforce, Virginia Catastrophic Livestock Mortality Taskforce and the National Homeland Security Research Center's Technology Testing and Evaluation Program Water Security Stakeholder Committee.

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