



<http://www.onehealthinitiative.com/>

“One Health is the collaborative efforts of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, plants and our environment.”

“One Health implementation will help protect and/or save untold millions of lives in our generation and for those to come.”

“Between animal and human medicine there are no dividing lines--nor should there be.”
Rudolf Virchow, MD (the father of cellular pathology)

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An Account of Recent One Health Actions

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Where we live, work and play has a tremendous impact on our health. Over the past several months, this undeniable link between humans, animals, and our environment has brought growing urgency to the concept of “One Health.” Although this concept is not new, it is becoming increasingly important (www.onehealthinitiative.com).

As our world becomes more globalized and urban sprawl brings more development, humans are in closer contact with wildlife making them more susceptible to disease. Recognizing the delicate balance of these interactions is necessary to protect and promote the health of all species. By taking a look at some specific ways in which One Health has made an impact in communities across the nation over the past year, we can begin to see how collaboration across various scientific disciplines can benefit human, animal, and environmental health.

Several recent global news events brought greater focus on One Health. In early 2012, a new coronavirus, Middle East Respiratory Syndrome coronavirus (MERS-CoV), was first identified in humans.¹ According to the World Health Organization (WHO), the source of the virus is still unknown. However, new research suggests that the virus may have an animal reservoir.² Similarly, in March 2013, the Chinese Centers for Disease Control and Prevention confirmed the presence of a new strain of avian influenza A (H7N9) that had not been previously reported in humans.³ The virus has the ability to infect humans through contact with infected animals or exposure to environments that have been contaminated with infected animals.

Events like these emphasize the importance of understanding disease transmission between humans and animals and the role of the environment in the epidemiology of these diseases. In addition, these events stress the need for increased zoonotic surveillance worldwide to reduce the ever-increasing risk of newly emerging diseases.

Medical professionals from around the world have come together to discuss similar One Health issues and share successes of collaboration across disciplines. In June 2013, more than 500 of the world's top scientific health professionals came together in Brussels, Belgium for The First World Research and Innovation Congress.⁴ This event brought together key stakeholders in health care research to discuss issues facing health care worldwide and proposed strategies to overcome these challenges.

There have been major One Health victories this year as a result of the collaboration of health professionals across various fields. In February 2012, the University of Texas MD Anderson Children's Cancer Hospital and Texas A&M University College of Veterinary Medicine teamed up to fight non-Hodgkin lymphoma in dogs using T-cell therapy, an immunotherapy that has been well tolerated in clinical trials on companions dogs and has provided a great comparative model for humans.⁵

In November 2012, the equine vaccine for hendra virus was developed in Australia, promising protection for horses and with the potential for helping to prevent more human cases.⁶ Many similar stories of One Health successes are coming to light as the gap between human and animal medicine narrows and the relationships between physicians, veterinarians, and environmental scientists continue to intersect.

One Health issues have also garnered recent attention among federal lawmakers. In May 2013, the Animal and Public Health Protection Act was introduced to the U.S. Senate.⁷ This new legislation could mitigate the spread of disease by providing a more stable flow of resources to the National Animal Health Laboratory Network (NAHLN). The NAHLN monitors animal-borne diseases that pose a significant threat to animal and public health and is part of a nationwide strategy to coordinate all organizations involved in animal disease surveillance. The bill would provide more comprehensive national surveillance of emerging infectious diseases and allow for more timely interventions. If it is passed it would be a great victory for animal and human public health. Consideration of the bill signifies the growing recognition of One Health issues and represents an important call to action at the national level to protect human and animal health.

* **Ms. Crawford** has been working in liaison with the One Health Initiative Autonomous *pro bono* team thanks to the gracious cooperation afforded by **Mrs. Kolian** of the American Public Health Association <http://www.apha.org/>.

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