

What is One Health?

One Health (OH) is the concept that the health of animals, the health of people, and the viability of ecosystems are inextricably linked. The importance of this concept is increasing as the expansion of human and animal populations, ecological changes due to human impact and climate variations, and technological advancements facilitating global human, animal, and product movements have resulted in an increased risk of disease transmission between animals and people. An OH approach embraces the idea that a disease problem impacting the health of humans, animals, and the environment can only be solved through improved communication, cooperation, and collaboration across disciplines and institutions. Further, OH recognizes that healthy productive livestock and pets lead to healthy people through food, economy, and companionship. While not a new idea, lately, OH has been acknowledged by national and international institutions as the most constructive approach for preventing and controlling diseases at the human, animal, and environmental interface.

The History of One Health

A German scholar from the mid 1800's, Rudolf Virchow, who came from a farming family, was an early proponent of OH. He said, "Between animal and human medicine there is no dividing line—nor should there be. The object is different but the experience obtained constitutes the basis of all medicine."

During the last 3 decades, approximately 75 percent of emerging infectious diseases among humans have been zoonotic diseases, which can be transmitted from animals to people. This has encouraged modern proponents of OH. In the 1980's, epidemiologist Calvin Schwabe called for a unified human and veterinary approach to combat zoonotic diseases, providing the modern foundation for OH.

The concept was advanced further when, in 2004, the Wildlife Conservation Society hosted a symposium that brought together an international group of human and animal health experts to discuss shared diseases among human, wild animal, and domestic animal populations. This

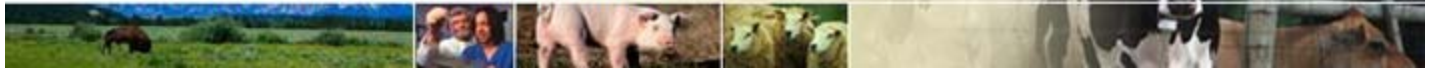
symposium introduced a set of priorities for an international and interdisciplinary approach to combat joint threats to human and animal health. In 2007, The American Veterinary Medical Association and the American Medical Association, adopted a vision supporting the concept of OH and formed the One Health Initiative task force. The task force brought together U.S. human and animal health agencies, medical doctors, and veterinarians. In addition, the National Strategy for Pandemic Influenza and its Implementation Plan resulted in several International Ministerial Conferences culminating in 2007 that involved the United Nations' Food and Agriculture Organization (FAO), the World Organization for Animal Health (OIE), and the World Health Organization. OH has also gained ground throughout the U.S. Government, led by the President's new initiatives for coordination and collaboration on national security and global development policy.

What is Veterinary Service's role in OH?

Veterinary Services (VS) has a rich history of applying veterinary public health principles to protect human health. For years, VS has controlled several serious zoonotic diseases, effectively protecting the public from transmission of these diseases.

Two major efforts initiated in the early to mid-1900's involved bovine tuberculosis (TB) and brucellosis. In addition to being transmissible from contact with live animals and carcasses, both of these diseases can also be transmitted through milk. At the turn of the century, about 20 percent of all human TB cases were caused by *Mycobacterium bovis*, the organism responsible for bovine TB. During 1930-1941, the United States reported approximately 29,600 human cases of brucellosis. Today, due to the cooperative effort to eliminate these diseases in cattle, both cattle and human cases have decreased dramatically. However, the need for cross-discipline cooperation to combat these and other zoonotic diseases continues.

Recently, new, emerging diseases have required collaboration between VS and other disciplines and organizations including the public health community. For example, in 2006, the on-going threat of a pandemic due to the highly pathogenic avian influenza A (H5N1) virus led to federal



interagency and global coordination of prevention and response activities. In 2008, the USDA and the FAO signed a framework agreement to address important global agriculture issues such as world hunger and plant and animal diseases. There is an ongoing need for VS to lead the U.S. OH effort in animal health and to partner more effectively with other U.S. government agencies, such as the Centers for Disease Control and Prevention and the Food and Drug Administration, to prevent and control problems that affect animal and human health and the environment.

Why Is One Health important to VS?

VS is currently working to implement an OH-specific strategy that will better position our agency to meet the animal health needs of the future. New USDA and APHIS OH initiatives are part of this plan. Implementing the VS 2015 One Health strategy will allow VS to build on past successes in safeguarding American agriculture and adopt a new paradigm to address the complex health relationships between both domestic and wild animals and humans, and their shared environment. The benefits of an OH approach include an enhanced ability to address human and environmental health problems by predicting risk and implementing prevention strategies.

VS and OH in the Future

VS created the OH working group to develop an OH strategic plan for VS to further incorporate OH principles and activities into our agency's framework. From our strategic plan, our OH Vision states that, "APHIS VS will provide U.S. leadership for the animal health component of One Health and, as a dedicated One Health partner, will contribute toward improving the global health of people, animals, ecosystems, and society." To implement its vision of OH, VS identified the following five goals:

1. Align VS policy, programs, and infrastructure with VS 2015 OH vision
2. Build new collaborations and partnerships and sustain existing relationships in the OH community
3. Spearhead outreach and communication to build credibility, trust, and respect in the OH community

4. Transform the APHIS VS culture and workforce, and build new skills to support and integrate VS 2015 OH principles
5. Apply our unique competencies to support and enhance the OH community

We will accomplish these goals through specific Strategic Plan tasks that include:

Year 1 Implementation – 2011 Priorities

Establish policies for national involvement in incidents involving zoonotic agents, including means to actively support requests for domestic OH investigations using VS personnel, resources, and expertise.

Establish policies for VS Regional and Area Offices or equivalent to support OH activities focusing on locally important, high-consequence issues.

Develop VS policy and role in pre-harvest food safety.

Continue to foster productive collaborations and sustained partnerships with Federal OH partners. This includes identifying additional constituent groups to advocate OH principles and VS' role in them.

Encourage and empower APHIS VS Area personnel to establish relationships and maintain collaborations with State, Tribal, and local OH partners.

Develop a VS OH communication plan.

Determine how VS' role in zoonotic disease surveillance contributes to broader surveillance efforts.

For more information on VS OH activities, contact the VS One Health Coordination Office at VS.OHCO@aphis.usda.gov

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