



<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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The One Health Initiative at University of Pennsylvania, School of Veterinary Medicine (Penn Vet) - USA

Throughout the world, hunger, poverty, and infectious disease threaten the world's overall health and well-being. Without action, these issues will spiral out of control and have irreversible effects. **The One Health Initiative** has shown a clear commitment to this necessary action in its promise to enhance the health of humans, animals, and the environment. Step by step, the **One Health Initiative** makes progress toward bettering public health, furthering research, educating the global population, and saving millions of lives.

In order to make a significant impact, the most effective long-term solutions will need to be a team effort, in which professionals from several fields combine their expertise to bring about change. So who are these key players? Policy makers, agriculturists, business leaders, city planners, biomedical health scientist researchers, physicians and veterinarians. That's right—veterinarians.

What many people do not realize is that veterinarians play a critical role in advancing the world's nutrition, health, and overall well-being. Without them, efforts to eliminate infectious diseases, to reduce poverty and hunger, and to ascertain that our meat and dairy products are of good quality, would be futile. Veterinarians are the key link to developing and sustaining long-lasting solutions to some of the world's most impairing problems. **The One Health Initiative's success** would be significantly hindered without its partnership with veterinarians.

[Penn Vet](#), a leading force in the veterinary medical field, has already accomplished an immense amount to further the goals of the **One Health Initiative**. Not only

does it strive to bring animals optimal health, Penn Vet works to better the health of humans throughout the world.

Global and Domestic Food Supply

Because of increasing urbanization, the world's food supply has suffered, resulting in widespread hunger and, in many locations, famine. One in six Americans fall asleep with empty stomachs. Similarly, many of the nation's poorest citizens can only afford fast food, which has lasting and deleterious effects.

Penn Vet's Center for Animal Health and Productivity has taken steps to combat food insecurity and provide more nourishing foods, like milk, meat, fruits, vegetables, and eggs. It has been successful in maintaining animal production, controlling feed cost of animals, and increasing the milk yield per dairy cow in order to better feed developed and developing countries.

Additionally, Penn Vet sends representatives to developing countries to teach them how to better manage their own local production. For example, a [learning center in Haiti](#) created by Penn Vet students has improved goat management practices, leading to greater financial independence for Haitians and reductions in malnutrition and poverty.

Safe, Nutritious Food

Veterinarians work tirelessly to ensure the nutritious quality and safety of the food humans ingest. Penn Vet currently possesses the most effective mechanisms to [test for salmonella](#) in eggs, which has now been adopted by the U.S. Food and Drug Administration (FDA).

Another Penn Vet mission is to maintain local food production. Especially within the US, much of the food supply is imported. The ["Penn gestation" project](#) has been largely successful in allowing Pennsylvania farmers to care for swine humanely and economically. With Penn Vet's help, America can be more self-sufficient, and food production will prosper for years to come.

Protection from Infectious Diseases

Arguably the most crucial Penn Vet contribution relates to its potential to protect the global population from infectious diseases. Since 75 percent of diseases found in humans are zoonotic (spread originally from animals), the role of veterinarians cannot be underestimated in this subject matter. Penn Vet has developed innovative [surveillance technology](#) to stop outbreaks efficaciously. An avian influenza outbreak in Pennsylvania was stopped at a cost of \$400,000, while a similar one in Virginia required more than \$100 million to be stamped out.

Animal Treatments That Help Humans

Veterinarians are uniquely trained in comparative biology, often transcending the animal world to apply their research and treatments to benefit humans, as well. For example, Penn Vet is currently collaborating with the Mayo Clinic to [predict and control seizures](#) in dogs and humans. Our vets have also discovered a protein that can help both animal and human patients [heal from bone fractures faster](#) and a [compound](#) that can help both animals and humans suffering from cancer and arthritis live pain-free lives. And our groundbreaking gene therapy work [treating canine blindness](#) is now in human trials.

Veterinarians and Public Safety

Penn Vet's work also helps train animals to serve as vital components in public safety. Detection dogs help to protect national security through their ability to identify threatening substances. Search dogs are able to locate victims of tornados, bombed buildings, and other disasters. Because Penn Vet recognizes the significant role animals can play in human protection, it has opened a national research center for detection dogs in Philadelphia called the [Penn Vet Working Dog Center](#). Three pups in the program are now also undergoing training to sniff out early stage ovarian cancer. Along the way, the Penn Vet team is working to increase collaborative research, scientific assessment, and shared knowledge and application of the newest scientific findings and veterinary expertise to optimize production of valuable detection dogs.

The Human / Animal Connection

The veterinarians' work can help facilitate human healing in other ways, as well. Penn Vet's Center for the Interaction of Animals and Society has observed a definite connection between interaction with animals and human mental health. The elderly, autistic children, and even prisoners have often shown improvement in their overall well-being due to relationships formed with animals.

The One Health Initiative is founded on exactly this—the necessity and inevitability of animal-human connections. Animal research conducted by veterinarians is vital to better both animal and human health.

A Few Final Words

Action is needed now. The welfare of the global population is dependent on the work of the **One Health Initiative** and the contributions of veterinarians. As a [leader in the field](#), Penn Vet will continue to play an essential role in this effort, combating pressing global issues in order to help protect present and future generations.

And we will continue to recognize exemplary contributions to the **One Health initiative**. In this effort, deans of the four health schools at the University of Pennsylvania—the Perelman School of Medicine, the School of Nursing Science, the School of Dental Medicine, and the School of Veterinary Medicine—annually present the One Health Award to recognize significant, collaborative research conducted among the schools. The 2013 Award was presented to Dr. Nicola Mason of Penn Vet and Dr. Yvonne Paterson of Penn Med and Penn Nursing Science for their project to further develop [cancer immunotherapies](#) that are already showing promise in both canine and human patients.

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