

What is One Health?

by Penny Farrell

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At a recent Development Policy Centre seminar at the ANU on [nutrition in developing countries](#), I was interested to learn that not all key participants were familiar with the term 'One Health'. Why is the concept unfamiliar and what indeed does it mean? Has it been overcomplicated with various schematic diagrams, infographics and flowcharts? Some may be attracted to these, while others are turned off by a perceived complexity.

I define One Health as a philosophical approach in which a transdisciplinary way of thinking is used by those working towards a common goal of optimising human and animal health globally. As a term, it is arguably better known among professionals and institutions with an animal health impetus than those that relate to human health and development. Do animal health policy makers have more to gain from working with their human health counterparts than vice versa in terms of access to funding? Probably. When technical expertise is considered however, there is a lot to be gained all round from becoming less like two sides and more like one.

Breaking down barriers between disciplines and integrating systems makes sense in our world of increasingly limited natural and financial resources. The World Bank recently [released a report](#) [pdf] that strongly supports the adoption of a One Health approach in the coordination of human, animal and ecosystem well being. It explains that lack of coordination between systems leads to gaps, and at times to overlap and the wastage of resources. The main focus of the report is the cost effectiveness of preparedness for *zoonotic disease* (communicable from animals to humans under natural conditions) pandemics versus that of not being prepared. It estimates that the most dramatic type of pandemic would cost \$US3 trillion and occur once every 100 years. According to the report, it would cost an estimated US\$3.4 billion in annual investment to build the capacity of One Health systems to prevent such a pandemic, leading to an expected global saving of US\$30 billion.

The key areas the money would be spent are the: identification of country spokespeople and coordinators; study of high risk geographical areas; creation of national and international cooperation agreements between human health, animal health and ecohealth institutions; preparation and oversight of legislation relating to disease reporting and emergency outbreak response efforts and; enhancing

surveillance systems and developing educational programs focused on One Health principles.

Interestingly, the report notes that Canada is the only country to have full One Health capacity in practical terms. It has streamlined and integrated human with animal diagnostic services at the levels of administration, laboratory research and emergency response.

The One Health concept also makes more sense when you consider that nature and disease do not simply exist within the frameworks that conventional professional disciplines have created. The term 'One Health, One Planet' encompasses the links between the health of the environment and the health of the species that inhabit it. The only effective approach can be to work together, share ideas and cooperate.

The [Cohab](#) initiative is founded on the premise that development to be sustainable it must "incorporate all areas of human activity and our interactions with the environment, and therefore requires that social, economic, public health and environmental needs be resolved holistically". Cohab offers plan biodiversity as an example of the importance of these interactions in play. If crops are to survive the effects of climate change and new plant diseases, their diversity must be protected. This is important for animal health, human food security and nutrition, both in relation to consuming plants directly and to consuming animals and their products.

The [Sydney Emerging Infectious Disease Colloquium](#), held on the 11th and 12th October 2012, brought together local and international experts in animal and human health fields. The program included talks on zoonotic threats to Australia, animal models for human diseases, microbial resistance in the farming industry and its effects on human health and food security. Collaboration between human and animal health professionals was referred to numerous times during the presentations. It was refreshing to hear that researchers working on emerging encephalitis in humans have recently joined the International Encephalitis Working Group and are actively looking for collaboration with veterinary colleagues. Another presentation given by a veterinarian working in Africa on a research project into the causes of respiratory disease in children, showed that skill sets learned in veterinary clinical degrees can be applied across disciplines to assist with the advancement of human health.

The [Australian International Food Security Centre](#) is supporting a new study coordinated by researchers in the Faculty of Veterinary Science at the University of Sydney called 'Strengthening food security through family poultry and crop integration in Eastern and Southern Africa'. The project involves a transdisciplinary

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team from the fields of anthropology and ecology, veterinary science, human and veterinary epidemiology, communications and nutrition. One Health is a key theme of the research, which is investigating whether helping farmers to keep their poultry healthy results in a higher nutritional and health status for their households and communities. More information is available [here](#).

The One Health approach should be important to anyone with an interest in policy, economics, public health, animal welfare and national and global security. The Development Policy Centre offers an ideal forum for the discussion of the benefits of One Health, ecohealth and transdisciplinary cooperation among the Australian development community, and I welcome any comments.

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