Commentary

Veterinary public health in the age of “one health”

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A framework for safeguarding animal health is of paramount importance to the economic welfare, public health, and food supply of nations and states. Animal health is profoundly sensitive to globalization and trade pressures, the restructuring of food and agriculture production into larger and more concentrated units, the rising demand for foods from animal sources, and human incursions into sylvatic habitats. Animal health and human health are inextricably linked, and their convergence carries both benefits and risks. Recent global events have shown that the emergence of new zoonotic diseases and the reemergence of old ones could pose threats to social, economic, and political stability. This reinforces the already persuasive arguments for greater collaboration between veterinary medicine and the other public health disciplines to protect animal and human health and create a cohesive infrastructure for zoonotic disease surveillance and response.

From what is known of the origins of the art and science of health care in early civilizations throughout the world, little or no differentiation was made between the healers of people and the healers of animals. Healers acted on the assumption that there was only one medicine, even though the specific term was not coined until the 19th century. Animals played such an important role in ancient societies and civilizations that they were even deified. To institutionalize the vital role that veterinarians play in public health, the WHO, a specialized agency of the United Nations, included a VPH unit in its headquarters in Geneva when it was chartered in 1947.

The WHO defines VPH as “the sum of all contributions to physical, mental, and social well-being of humans through the application of veterinary science.” This definition provides the conceptual framework and program structure around which multidisciplinary and collaborative activities have been developed. Many reports of expert and technical committees convened by WHO and other international organizations provide guidelines and recommendations to United Nations member states for addressing issues related to zoonotic disease control and food safety. These guidelines and recommendations continue to be relevant today, and we should revisit them and build on their successes.

United Nations member states have followed the WHO template in organizing national VPH programs. Among them were the once-famous VPH unit at the CDC in the United States, at one time the largest and most successful VPH program among nations involved in the Pan American Health Organization. One could speculate that the great success of these national VPH programs has also led, at least in part, to their extinction, as has been the case for many successful public health programs. Although the WHO’s VPH unit was eliminated as a separate entity at its Geneva headquarters, the WHO continues to support VPH. In 2001, for example, it published the Report of the Study Group on Future Trends in Veterinary Public Health, which updated the 1975 Report of the Joint Food and Agriculture Organization of the United Nations/WHO Expert Committee on Veterinary Public Health.

An important landmark in the one-health movement was a meeting convened by the Wildlife Conservation Society in 2004 that focused on current and potential movements of diseases among humans, domestic animals, and wildlife populations. An important outgrowth of that meeting were the so-called Manhattan Principles, named for the meeting’s location, which urge leaders, civil society, and the health and science communities to take a holistic approach to preventing epidemic and endemic diseases and maintaining ecosystem integrity. In the face of alarming global zoonotic disease threats at the threshold of the 21st century, the need to forge a more strategic and concerted collaboration between veterinary and medical health was markedly put into focus with outbreaks of highly pathogenic avian influenza and zoonotic influenza caused by the H1N1 virus.

The term “one health” is a good sound bite, a buzzword rapidly brought into the mainstream by policy makers. The launch of the One Health Initiative marked a defining moment for the recognition of the role of veterinary medicine in human health. It was a great opportunity that the veterinary profession perhaps failed to grasp at the right moment. We started to be marginalized. We did not move with a sense of purpose to occupy our space effectively. Even the zoonotic diseases were expropriated by other public health disciplines. Our words paled into platitudes. We talked and convinced ourselves, in our minds, of our importance in the one-health movement. Meanwhile, veterinarians were and continue to be stereotyped, tethered within their professional confines.

The predicted catastrophic global consequences of zoonotic influenza catalyzed national and international...
authorities to act with a sense of urgency. It provided the political momentum to develop a strategic framework for reducing risks of infectious diseases at the animal-human-ecosystem interface. At least 200 zoonotic diseases have been identified, and most, if not all, of the human infectious diseases that have emerged in the past two decades are of animal origin, including AIDS, new variant Creutzfeldt-Jakob disease, SARS, Hendra virus disease, and Nipah virus disease. Many zoonotic diseases are potential agents for use in bioterrorism in our increasingly polarized world.¹⁰

One health, as defined by the Joint Task Force of the AVMA and American Medical Association, “is the collaborative effort of multiple disciplines—working locally, nationally, and globally—to attain optimal health of humans, animals, and our environment.” Public health, according to the Institute of Medicine of the US National Academy of Sciences, “is what we, as a society, do collectively to assure the conditions in which people can be healthy.” This means that health cannot be achieved by the health sector alone. It needs intersectoral and interdisciplinary collaboration, community participation, and the use of appropriate technology (ie, technology that is scientifically sound, culturally acceptable, and available at a cost that the community can sustain).

Experiential models suggest that VPH will continue to provide the organizational basis and program structure to move forward the concept of the one-health approach. Veterinarians will play a crucial leadership role because zoonotic disease control at the veterinary level has been shown to be more cost-effective, compared with control of these diseases after they spill over to human populations. Veterinary medicine is therefore in a unique position at both the academic and professional levels to energetically reach out of its professionally protected comfort zone of licensure and to sustain operational collaboration with the other public health disciplines and sectors involved in national development.

Perhaps we have no one else to convince more of the many and great contributions of veterinarians to public health than ourselves. A never-ending process, veterinarians must perpetually sustain the momentum of engagement and operational collaboration with other sectors and stakeholders. How we contribute effectively in an amorphous, interdisciplinary field, without the protection of professional licensure to practice, will be our biggest challenge.¹¹

The history of human health is replete with great contributions of veterinary medicine. “Study the past,” counseled the Chinese philosopher Confucius, “if you would define the future.”¹² We celebrate 2011 as World Veterinary Year with a great sense of pride. We also commemorate the 250th year of the founding of the first veterinary school in Lyon, France. But in this celebratory mood, the words of Sir Winston Churchill at the advent of World War II should strike a chord: “Let us therefore brace ourselves to our duties, and bear ourselves.”¹³

In today’s digital age, we must be perspicacious in discriminating the critical difference between knowledge and wisdom. Knowledge is knowing what to do. Wisdom is doing what you should. Our ability to simultaneously deploy both knowledge and wisdom in a 3-D equilibrium will be essential to advance veteri-

References