



Companion Animals & One Health

The relationship between humans and their companion animals is an intense one, with many individuals ascribing family member status to their beloved pets. Accordingly, activities such as sleeping, eating, and close contact are commonly shared experiences for humans and pets, which also routinely enter classrooms, therapy rooms, and other public venues. The intangible benefits are enormous; authors of this proposed reporting surveillance program argued that increased awareness of zoonotic diseases is essential.

This report from members of the World Small Animal Veterinary Association (WSAVA) One Health Committee advocated a stringent reporting system to monitor the incidence of infectious diseases in companion animals. A comprehensive list of significant zoonotic diseases is provided, as well as a brief discussion of surveillance systems, some of which are currently used for rabies and leishmaniasis. Also discussed were other effective surveillance systems, with a focus on developing others. Such systems would provide invaluable information to public health and regulatory authorities, enhancing the general health of both human and companion animal populations.

■ Commentary

At the outset, I admit to some degree of bias in discussing this report, as I am a member of the WSAVA Executive Board and the paper was authored by the chair and members of one of our most important committees: the WSAVA One Health Committee.

One Health is a relatively new term, but the concept has been around for a long time. Humans and animals share many diseases, infectious and otherwise, and human and veterinary medical professions can, and have, learned much from each other. Most emphasis, however, has been on large animal zoonotic disease and public health issues; the zoonotic potential of companion animal diseases and zoonoses have been largely ignored—until now. Professor Michael Day and his colleagues made a strong case for initiating a global surveillance system for companion animal zoonotic diseases, of which the most dramatic is perhaps rabies. An estimated 55,000 humans in India and Africa die from rabies each year, most from the result of rabid dog bites. The WSAVA has teamed with the World Organisation for Animal Health (OIE) to try to attack this problem through rabies vaccination and education programs, but much remains to be done.

Monitoring and reporting infectious diseases, especially in developing nations, are expensive, and it may take a new crisis (remember SARS?) to move governments, industries, and NGOs to take action. I urge our readers to obtain the full report to gain a better understanding of the issue. The report also contains an informative table of the major companion animal infectious zoonotic diseases. This refreshed and updated my knowledge in this important arena; I hope that it will do the same for readers of *Clinician's Brief*.—Colin F. Burrows, BVetMed, PhD, Hon FRCVS, DACVIM

■ ■ Source

Surveillance of zoonotic infectious disease transmitted by small companion animals. Day M, Breitschwerdt E, Cleaveland S, et al. *EMERG INFECT DIS* doi 10.3201, 2012; <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3406644/>



Adapting Human CPR Guidelines to Dogs & Cats

Although the American Heart Association (AHA) revises its cardiopulmonary resuscitation (CPR) consensus guidelines every 5 years, until recently veterinary medicine did not publish any guidelines. Instead, veterinary CPR guidelines were based on human CPR guidelines or extrapolated from veterinary review articles and experimental models. This approach has shortcomings, as the anatomy, physiology, and mechanisms of cardiopulmonary arrest, and the circumstances in which it arises, differ widely among species. This article reviewed recent updates to AHA guidelines and, using evidence from the veterinary literature, speculated how these modifications pertain to veterinary patients.

One recent change in the human guidelines indicated that cardiac compressions should be initiated as soon as the unresponsive, apneic state is noted, without pausing to take the pulse or give rescue breaths. Rescue breathing is deemphasized in favor of maximizing cardiac output. These guidelines take into account the typical scenario of the lone bystander stepping in to administer CPR to a heart attack victim; however, in cats and dogs, the situation is different.

The AHA revised guidelines do pertain to veterinary CPR with regard to rate and depth of cardiac compressions; use of atropine

for bradycardia and asystole; use of biphasic vs monophasic defibrillators; and new target indices for blood pressure, cerebral perfusion pressure, glycemic control, postarrest oxygen supplementation, and therapeutic hypothermia.

■ Commentary

This review outlined changes in human CPR, including beginning compressions before attempting breathing in an arrested patient. However, there are many dissimilar factors when addressing cardiopulmonary arrest in human vs veterinary patients.

Of note, standard veterinary CPR guidelines were recently published, using methodology similar to the AHA guidelines. Evidence-based medicine supported the new veterinary guidelines, known as the RECOVER initiative (Reassessment Campaign on Veterinary Resuscitation), also published in the *Journal of Veterinary Emergency and Critical Care* in 2012. The new guidelines are comparable to the guidelines formulated by the AHA.—*Lisa Powell, DVM, DACVECC*

■ ■ Source

Updates in the American Heart Association guidelines for cardiopulmonary resuscitation and potential applications to veterinary patients. Maton BL, Smarick SD. *JVECC* 22:148-159, 2012.