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Tackling Disease Challenges in Domestic Animals and Wildlife

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Introduction

The health of domestic animals and wildlife is a critical aspect of both veterinary care and environmental conservation. Diseases, whether infectious or chronic, pose significant challenges that require coordinated efforts across various sectors, including veterinary medicine, wildlife conservation, public health and environmental protection. These challenges are further compounded by the increasingly complex interactions between humans, animals and the environment. In this article, we explore the primary disease challenges faced by domestic animals and wildlife and discuss strategies to mitigate their impact. Domestic animals, including livestock and pets, are vital to human well-being. They contribute to food production, companionship and overall quality of life. However, these animals are frequently susceptible to a range of diseases, many of which have the potential to spread to humans (zoonoses). The challenges in managing disease in domestic animals are vast and require multi-pronged approaches. Zoonotic diseases are those that can be transmitted from animals to humans and they remain a significant concern in both veterinary medicine and public health. Domestic animals-especially those raised for food production, such as poultry, cattle and pigs-serve as reservoirs for many zoonotic pathogens [1-3].

Description

Antimicrobial resistance is one of the most pressing challenges in both human and veterinary medicine. The overuse and misuse of antibiotics in livestock and companion animals have led to the emergence of drug-resistant pathogens, making infections harder to treat and more costly to manage. Overprescribing antibiotics in animal husbandry, especially in the absence of infections, contributes to resistance. The spread of resistant bacteria can make treating common illnesses, such as pneumonia in cattle or infections in pets, more difficult. This also has the potential to affect human health, as resistant bacteria can jump from animals to people through direct contact or the food supply. Tackling AMR involves reducing the unnecessary use of antibiotics in animals, implementing stricter regulations and promoting alternatives like probiotics, vaccines and improved husbandry practices. Surveillance systems to monitor resistance patterns are also crucial for developing targeted treatment strategies and preventing the spread of resistant organisms. In addition to infectious diseases, domestic animals-particularly companion animals-are prone to chronic conditions such as arthritis, heart disease, diabetes and cancer. These diseases often result from a combination of genetics, lifestyle and environmental factors. Preventive care, including regular veterinary check-ups, balanced diets, weight management and exercise, is key to reducing the risk of chronic diseases in domestic animals. Routine vaccinations and parasite control programs also contribute to overall health and well-being. Wildlife health is just as critical, not only for the survival of species but also for maintaining ecosystem balance and preventing the transmission of diseases that could impact domestic animals or humans. Wildlife populations face unique disease challenges due to their interaction with both the natural environment and human activity. Emerging infectious diseases are a growing concern for wildlife, as they can devastate populations and even lead to species extinction. These diseases are often caused by pathogens that jump from other species (including humans or domestic animals) into wildlife populations, a process known as spillover. Some notable examples include chronic wasting disease in deer, white-nose syndrome in bats and avian influenza in wild birds [4,5].

Conclusion

Tackling disease challenges in both domestic animals and wildlife requires a multi-faceted approach that combines prevention, surveillance, research and effective policy. Whether addressing zoonotic diseases, antimicrobial resistance, or emerging threats in wildlife, a collaborative One Health approach is key to safeguarding both animal populations and public health. By fostering partnerships between veterinarians, wildlife conservationists, public health officials and the broader community, we can mitigate the impact of these diseases and ensure a healthier, more sustainable future for both domestic and wild animal populations.

References

1. Roumbedakis, Katina, Marina N. Alexandre, José A. Puch and Carlos Rosas, et al. "Short and long-term effects of anesthesia in *O. maya* (cephalopoda, octopodidae) juveniles." *Front physiol* 11 (2020): 697.
2. Polese, Gianluca, William Winlow and Anna Di Cosmo. "Dose-dependent effects of the clinical anesthetic isoflurane on *O. vulgaris*: A contribution to cephalopod welfare." *J Aquat Anim Health* 26(2014): 285-294.
3. Butler-Struben, Hanna M., Samantha M. Brophy, Nasira A. Johnson and Robyn J. Crook, et al. "*In vivo* recording of neural and behavioral correlates of anesthesia induction, reversal and euthanasia in cephalopod molluscs." *Front physiol* 9 (2018): 109.
4. Dingerkus, G. and E. D. Santoro. "Cornea regeneration in the Pacific giant octopus, *O. dofleini* and the common octopus, *O. vulgaris*." *Experientia* 37 (1981): 368-369.
5. Harrison, F. M. and A. W. Martin. "Excretion in the cephalopod, *O. dofleini*." *J Exp Biol* 42 (1965): 71-98.

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