



ACTIVIDAD DE INVESTIGACIÓN
"LA IMPORTANCIA DE LA VETERINARIA
EN LOS DIFERENTES CAMPOS PROFESIONALES"
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THE IMPORTANCE OF VETERINARY MEDICINE IN DIFFERENT PROFESSIONAL FIELDS

Abstract (Resumen)

Veterinary medicine is a professional discipline that extends far beyond the care of animals. Its scope includes public health, food security, scientific research, wildlife conservation, and environmental protection. This essay explores the diverse fields in which veterinary medicine plays a crucial role and emphasizes its impact on human society. By analyzing its importance in companion animal care, livestock management, public health, research, wildlife preservation, and policymaking, this work highlights how veterinarians are indispensable professionals not only for animal welfare but also for global sustainability and human well-being.

Introduction

The practice of veterinary medicine has often been misunderstood as a profession limited to treating sick pets. However, the reality is much broader. Veterinarians are essential actors in multiple areas of society, and their work connects animal health with human health and environment balance. This interconnection is explained through the "One health" concept, which recognizes that the well-being of people is inseparable from the well-being of animals and ecosystems.

Veterinary medicine is an ancient science that has evolved alongside humanity. From the domestication of animals thousands of years ago to the modern era of biotechnology, veterinary professionals have adapted to new challenges and global needs. Today, they are part of scientific innovation, food safety programs, wildlife protection efforts, and international health organizations.

The objective of this essay is to analyze in detail the importance of veterinary medicine in different professional fields. The development section is organized into six areas: companion animal care, livestock and food production, public health, research and biotechnology, wildlife and conservation, education and policy.

Through this structure, the essay will demonstrate that veterinary medicine is a profession that transcends traditional perceptions and occupies a central role in building a healthier, safer, and more sustainable world.

Development

1. Companion Animal Care

One of the most visible and socially recognized roles of veterinary medicine is the care of companion animals such as dogs, cats, rabbits and exotic pets. In contemporary societies, pets are considered family members, and their physical and emotional health is priority. Veterinarians ensure their well-being through preventive care, vaccinations, nutrition counseling, surgeries, and treatments for chronic or acute diseases.

Beyond medical interventions, veterinarians also educate owners on responsible pet ownership, which includes proper nutrition, exercise, and disease prevention. This professional service not only improves the quality of life of animals but also strengthens the human-animal bond, which has been shown to contribute positively to human psychological and emotional health. In this sense, veterinary medicine plays an indirect yet profound role in improving human quality of life.

2. Livestock and Food Production

Veterinary medicine is indispensable in livestock management and food production. Farm animals such as cattle, pigs, poultry, goats and sheep are the backbone of food systems worldwide. Veterinarians ensure the health and productivity of these animals by preventing and treating infectious diseases, guiding vaccinations programs, and supervising animal welfare.

Moreover, veterinarians are central to ensuring food safety. By inspecting animals before and after slaughter, they reduce the risk of contaminated meat, milk, or eggs entering the human food chain. This function directly protects consumers from foodborne illnesses such as

Salmonellosis, listeriosis, or E. coli infections.

In addition, veterinary professionals work to develop sustainable farming practices that reduce the environmental impact of animal production. They promote efficient resource use, responsible use of antibiotics, and innovative techniques such as precision livestock farming. Their work guarantees both the productivity of farms and the protection of ecosystems, showing the multidimensional contribution of veterinary medicine to society.

3. Public Health and one health approach

One of the most critical contributions of veterinary medicine lies in the field of public health. Many of the most dangerous diseases affecting humans are zoonotic, meaning they originate in animal. Examples include rabies, avian influenza, Ebola, and even COVID. Veterinarians are on the frontlines of preventing, detecting, and controlling such diseases.

The "One health" approach has become a global strategy that emphasizes collaboration among veterinarians, medical doctors, epidemiologists, and environmental scientists. By integrating knowledge across disciplines, this approach allows for a better understanding of disease dynamics and more effective interventions.

For instance, rabies eradication programs rely heavily on veterinarians, who implement large-scale vaccination campaigns in dogs, the main transmitters of the virus to humans. Similarly, veterinarians contribute to monitoring wildlife and livestock for early signs of emerging diseases, preventing outbreaks before they become pandemic. This highlights their role as guardians of public health at both local and global levels.

4. Research and Biotechnology

Veterinarians are also scientists who contribute to the advancement of knowledge in various disciplines. In research laboratories, they study animal physiology, genetics, and

Pathology to develop innovative solutions that benefit both animals and humans.

In the field of biotechnology, veterinarians participate in the creations of vaccines, diagnostic tools, and therapeutic drugs. Many of these advances are first tested in animal models before being adapted to human medicine. For example, reproductive technologies such as artificial insemination, in vitro fertilization, and cloning have been perfected in veterinary science before becoming tools in human medicine.

Furthermore, veterinarians play a role in the development of new approaches to tackle antibiotic resistance, a growing global health threat. Their research on alternative therapies, microbiome management, and biosecurity measures contributes to a healthier future for all living beings.

5. Wildlife and Conservations.

Another crucial fields is wildlife health and conservation. Veterinarians working in this area protect biodiversity by rehabilitating injured wild animals, monitoring endangered species, and designing health management programs for zoos and natural reserves.

The importance of this fields has grown in recent decades due to the increasing awarness of ecological balance. Veterinarians not only protect individual animals but also entire ecosystems by preventing the spread of diseases between wild e, domestic animals, and humans. for instance, monitoring bat populations has been essential in understanding the origins of coronaviruses, while controlling bovine tuberculosis in wild deer populations has protected both agriculture an human health.

Conservation medicine, therefore, reflects how veterinary professionals contribute to the preservation of life on Earth, aligning their work with environmental sustainability and global ecological security.

6. Education, Legislation and Policy

Finally, veterinary medicine also plays an essential role in education, law, and policy-making. Veterinarians teach at universities, training future professionals not only in technical skills but also in ethics, responsibility, and interdisciplinary collaborations. They also raise awareness in communities about animal welfare, responsible food consumption, and public health issues.

At the governmental and international levels, veterinarians contribute to the development of laws and regulations related to food safety, disease control, and animal rights. Organizations such as the World Organisation for Animal Health (WOAH), the World Health Organization (WHO), and the Food and Agriculture Organization (FAO) rely on veterinary expertise to design global policies. In this way, veterinary medicine influences decisions that affect millions of people and animals worldwide.

Conclusion

Veterinary medicine is a profession of immense relevance that extends far beyond the popular image of a veterinarian treating a sick dog or cat. It is a science and an art that connects animal welfare with human well-being, food safety, scientific innovation, biodiversity and environmental sustainability.

By analyzing its impact across different professional fields - companion animal care, livestock and food production, public health, research, wildlife conservation and policy-making - this investigation demonstrates that veterinarians are indispensable actors in modern society. Their work illustrates the interconnectedness of life on Earth and the importance of maintaining a balance between humans, animals and ecosystems.

In conclusion, veterinary medicine is not only about healing animals. Without the contribution of veterinarians, human society would face severe threats to health, food security and ecological balance. Veterinary medicine is a step toward building a healthier, safer, and more sustainable world for all.