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en los diferentes campos profesionales

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Summary

In today's society, Veterinary medicine is essential encompassing multiple professional fields. Playing crucial roles in public health, in the activities and work performed, they contribute to functions that transcend traditional clinical care, participating in administrations, research, teaching, animal food production, and the care of small species. The prevention and treatment of animal diseases is carried out in harmony with the environment, thus ensuring the protection of human health.

Introduction

Veterinary medicine plays a crucial role in the protection and care of animal health, ensuring that domestic, farm, and wild animals receive adequate care to prevent and treat diseases. This not only improves the animals' quality of life but also contributes to the sustainability of agricultural production, ensuring safe and nutritious food for the human population.

In the field of public health, veterinarians are essential in the management and control of zoonotic diseases - those that can be transmitted from animals to humans, such as rabies, brucellosis, and avian influenza. Their work in epidemiological surveillance, vaccination, and biosecurity programs helps prevent outbreaks and protect human communities.

Furthermore, veterinary medicine is relevant in biomedical research, as many animal models are used to study human diseases, develop medical treatments, and advance pharmacology.

1. = Role of veterinarians in zoonotic diseases =

Most private veterinarians contribute to public health through their routine practice. Both large and small animal practitioners become experts in diagnosing acute and chronic animal diseases, which can affect owners, their families, and the surrounding communities. Specific examples of public health activities include performing routine health examinations, maintaining vaccination regimens, implementing parasite control programs, counseling immunocompromised individuals on the risks of animal contact, facilitating the use of guide and service dogs for people with disabilities, and promoting the benefits of the human-animal bond.

Communities are best served when veterinarians approach collective health issues from a population health perspective applying epidemiological principles relevant to the community or populations level. In addition to these direct services, veterinarians report disease developments and trends to regulatory and public health agencies collaborate with physicians on zoonotic disease prevention and control, and advise local health boards and commissions.

2. = Role of veterinarians in food safety =

Veterinarians working with food animals and those employed by government agencies contribute significantly to the safety of the food sector. Roles in food animal production can be classified by production stage. Ante-mortem activities include animal welfare assurance,

Zoonotic disease recognition and prevention, pre-slaughter animal inspection, and antibiotic residue testing. post-mortem activities include carcass inspection and tissue residue determination.

Food animal clinical veterinarians also contribute to public health in general through farm health programs, which include disease treatment and prevention, care, management, and environmental assessment; reproductive efficiency; vaccination schedules, nutrition, stress reduction, raw material protocols (e.g. the national meat quality assurance program) and biosecurity and biocontainment plans. In addition to monitoring animal health, other important activities include the appropriate and adequate use of antimicrobials, disease surveillance, outbreak, outbreak investigation, and mitigation, and vaccination against specific pathogens of high incidence or prevalence.

3. = Role of veterinarians in biomedical research =

Humans interact with animals in many ways every day, from sharing loving companionship with pets, to playing and competing together in sports, and managing herds and managing herds and flocks that provide food. The health of humans in several ways. Many diseases and pathological processes that occur naturally in animals are identical to those in humans (e.g., osteoarthritis, diabetes, and many cancers). Basic biomedical research into these problems provides solutions that can benefit both animals and humans. Animals have benefited from many therapeutic advances adopted from human medicine. Conversely, veterinary clinical trials can provide information on promising treatments for use in humans.

Based on information from public health surveillance, research institutions must better understand the interactions among hosts, parasites, vectors, pathogens, and the environment.

4. Role of veterinarians in public health

This is the field of action where veterinarians are perhaps most relevant in their contribution to human health worldwide. Health organizations around the world require veterinarians to rigorously inspect checkpoints where there are potential risks of the spread of zoonotic diseases (transmission of diseases from animals to humans) and anthroozoonotic diseases (transmission of diseases from humans to animals), in order to prevent the occurrence of epidemics or pandemics in humans. These potential risk factors include transmission means such as the consumption of contaminated food (meat, milk), through airborne transmission, or through direct contact with mucous membranes or biological secretions of sick animals.

To achieve this, it is necessary to have knowledge of:

- The biological cycles of parasites that are shared between species (in which different animal intermediaries are involved), in order to be able to interfere with these cycles (naturally or artificially)
- Pathologies of bacterial or infectious causes (zoonotic and/or anthroozoonotic)

Within this field of action, necropsies play a very important role, helping to determine the causes of death of an animal prior to its death or slaughter.

4.1 Government entities

In matters of preventive medicine for populations, to carry out actions leading to the prevention of high-risk diseases for animals and humans.

4.2. - Slaughterhouses

In slaughterhouses, also popularly known as "slaughterhouses" veterinarians are responsible for ensuring the safety of animal-based food by ensuring that no sick animals are brought in for human consumption.

5. - The role of the veterinarian in wildlife and Ecosystem health

The health of wildlife and ecosystems takes on special importance in an increasingly urbanized and prosperous society. Nature is increasingly impacted by urban development and industrial agriculture. There is growing concern for the preservation of wildlife and endangered species, and a growing recognition of the value of wildlife

as guardians of overall environmental health. The emergence of Lyme disease in the human population in New England, partly due to changes in land-use patterns, and of chronic wasting disease (a transmissible spongiform encephalopathy similar to BSE) in elk and deer in the western United States and Canada, highlights the importance of research on wildlife and ecosystem health.

6. — Role of veterinarians in government and legislative activity

Veterinarians are employed at various levels of state and federal government. More than 3000 veterinarians are working at the federal level, nearly two-thirds of whom are at the USDA.

Public health programs comprise the majority of these employment opportunities, with animal care being a smaller fraction. Examples include oversight of food safety inspection programs, disease surveillance and outbreak investigation, laboratory animal care, biomedical research and management, and leadership of public health programs. At the state level, each department of agriculture typically has a state veterinarian who is charged with directly protecting the livestock, poultry, and aquaculture industries, and indirectly the public, through the prevention, early detection, containment, and eradication of diseases of livestock, production birds, and economically important fish that, in many cases, are transmissible to people.

Conclusión

Veterinary medicine not only ensures the health and well-being of animals but also plays a key role in food security by guaranteeing safe, high-quality animal products. Its work in controlling zoonotic diseases protects the importance of veterinarians public health. Furthermore, the fields of biomedical research and pharmacology benefit from veterinary knowledge to develop treatments and technologies applicable to human health.

Attention to animal welfare and species conservation reinforces ethics and responsibility toward the environment and wildlife.

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