



Preventing Zoonotic Diseases: An Investigation into Veterinary Medicine's Role in Public Health

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Abstract: Animal infectious diseases are an important public health issue that threatens human health, and veterinarians play an important role in preventing and controlling animal infectious diseases. This study aims to explore the role of veterinarians in preventing animal infectious diseases and public health. Through interviews and questionnaire surveys with veterinary workers, this study collected their practical experience in animal disease monitoring, diagnosis, prevention, and control, as well as their participation and challenges in public health. The research findings reveal the crucial role of veterinarians in the prevention of animal infectious diseases, particularly in improving animal health, maintaining public health safety, and promoting harmonious coexistence between humans and nature. In addition, the study also identified challenges faced by veterinarians in public health work, such as resource constraints, demand for professional knowledge, and insufficient public awareness. Based on the research results, suggestions were proposed to improve the role of veterinarians in public health, in order to provide reference for the future development of veterinarians in the field of public health.

Keywords: animal infectious diseases, veterinary medicine, public health, prevention, investigation, challenges

1. Introduction

Animal infectious diseases not only pose a serious threat to animal health, but also have a significant impact on public health and safety. Therefore, measures to prevent animal infectious diseases are crucial for ensuring human health and animal welfare. In this context, veterinarians, as the main guardians of animal health, cannot be ignored in the prevention of animal infectious diseases and public health.

Veterinary medicine has unique advantages in preventing animal infectious diseases. Firstly, veterinarians possess rich knowledge and skills in animal diseases, enabling accurate diagnosis and effective treatment of animal diseases. Secondly, veterinarians play an important role in key areas such as animal farms, slaughterhouses, and animal product processing plants, effectively monitoring the health status of animals and detecting and controlling the spread of animal infectious diseases in a timely manner. In addition, veterinarians work closely with government departments, research institutions, and other relevant organizations to jointly develop and implement strategies for preventing animal infectious diseases[1].

However, the role of veterinarians in public health has not been fully recognized. On the one hand, the public's insufficient understanding of the role of veterinarians in public health has led to insufficient support for their efforts in animal disease prevention and control. On the other hand, veterinarians face many challenges in public health work, such as resource constraints and the need for professional knowledge. Therefore, it is necessary to conduct in-depth research on the role of veterinarians in public health, in order to provide reference for the future development of veterinarians in the field of public health.

This study aims to explore the role of veterinarians in preventing animal infectious diseases and public health. Through interviews and questionnaire surveys with veterinary workers, this study collected their practical experience in animal disease monitoring, diagnosis, prevention, and control, as well as their participation and challenges in public health. The research findings will reveal the crucial role of veterinarians in the prevention of animal infectious diseases, particularly in improving animal health, maintaining public health safety, and promoting harmonious coexistence between humans and nature. In addition, the study will identify the challenges faced by veterinarians in public health work and propose suggestions for improving the role of veterinarians in public health. Through this study, we aim to increase public awareness of the role of veterinarians in public health and promote further development of veterinarians in the field of public health.

2. Animal infectious diseases and public health

Animal infectious diseases refer to diseases caused by pathogens (such as bacteria, viruses, parasites, etc.) that can be transmitted between animals. These pathogens can be transmitted through various channels, including direct contact,

airborne transmission, food transmission, etc. Animal infectious diseases not only pose a serious threat to animal health, but also have a significant impact on public health and safety. The impact of animal infectious diseases on public health and safety is mainly reflected in the following aspects:

(1) Direct transmission to humans: Some animal infectious diseases can be transmitted to humans through direct contact or air transmission, such as rabies, avian influenza, etc. These diseases not only pose a threat to animal health, but may also pose a serious threat to human health.

(2) Food transmission: Animal infectious diseases can be transmitted to humans through food, such as meat, dairy products, etc. If animals are slaughtered and processed during the incubation or disease onset period, food may contain pathogens, posing a risk to human health.

(3) Indirect transmission: Some animal infectious diseases can be transmitted to humans through insects or other vector organisms, such as malaria, dengue fever, etc. These diseases not only pose a threat to animal health, but may also pose a serious threat to human health.

(4) Impact on public health resources: The occurrence and spread of animal infectious diseases may have an impact on public health resources, such as medical resources and public health budgets. This may lead to a shortage of public health resources and affect the resolution of other public health issues.

Therefore, preventing animal infectious diseases is crucial for ensuring public health safety. As the main guardians of animal health, veterinarians play an important role in preventing animal infectious diseases and public health, which cannot be ignored. Veterinarians possess rich knowledge and skills in animal diseases, enabling accurate diagnosis and effective treatment of animal diseases. In addition, veterinarians play an important role in key links such as animal farms, slaughterhouses, and animal product processing plants, effectively monitoring the health status of animals, and timely detecting and controlling the spread of animal infectious diseases[2].

3. Survey results on the role of veterinarians in public health

This study collected practical experience of veterinarians in animal disease monitoring, diagnosis, prevention, and control, as well as their participation and challenges in public health, through interviews and questionnaire surveys with veterinary workers. The research findings reveal the crucial role of veterinarians in the prevention of animal infectious diseases, particularly in improving animal health, maintaining public health safety, and promoting harmonious coexistence between humans and nature. The role of veterinarians in animal disease monitoring cannot be ignored. They conduct regular health checks and disease monitoring on animals to promptly detect and report the occurrence and spread of animal diseases. This helps the government and relevant departments to timely understand the health status of animals and develop and adjust animal disease prevention and control strategies.

Veterinary medicine plays an important role in the diagnosis of animal diseases. They possess professional knowledge and skills to accurately identify and diagnose animal diseases, providing a basis for disease prevention and control. In addition, veterinarians can provide professional advice and support to the government and relevant departments during disease outbreaks. Veterinary medicine also plays an important role in the prevention and control of animal diseases. They effectively control and prevent the occurrence and spread of animal diseases by developing and implementing animal health plans, implementing measures such as vaccination, drug treatment, and biosafety. In addition, veterinarians can assist the government and relevant departments in emergency response and epidemic control during disease outbreaks. Veterinarians face many challenges in public health work. Firstly, resource constraints are the main issue faced by veterinarians in public health work. Many veterinary institutions lack sufficient funds and human resources to effectively carry out animal disease monitoring and prevention and control work.[3] Secondly, the demand for professional knowledge is also a challenge. With the continuous changes in animal disease spectrum and the emergence of new animal diseases, veterinarians need to constantly update their knowledge and skills to cope with the constantly changing public health challenges. In addition, insufficient public awareness is also a problem faced by veterinarians in public health work. The lack of public awareness of the role of veterinarians in public health has led to insufficient support for their efforts in animal disease prevention and control[4].

4. The Challenges and Development of Veterinary Medicine in Public Health

The role and development of veterinarians in the field of public health face various challenges. Firstly, resource constraints are the main issues faced by veterinarians in public health work, including funding, personnel, and technical equipment. Secondly, with the continuous changes in animal disease spectrum and the occurrence of new infectious diseases, veterinarians need to constantly update their knowledge and skills to adapt to the changes in the field of public health. In

addition, the lack of public awareness of the role of veterinarians in public health has led to insufficient support for their efforts in animal disease prevention and control.

To address these challenges, the development of veterinary medicine in the field of public health needs to focus on the following aspects:

(1) Strengthen collaboration between veterinary institutions and public health departments, share resources and information, and improve the efficiency of animal disease monitoring and prevention.

(2) Improve the professional training and education level of veterinarians, enhance their professional knowledge and skills, and respond to challenges in the field of public health. Strengthen public education and publicity, enhance public awareness and understanding of the role of veterinarians in public health, and enhance their support and cooperation in veterinary work.

(3) Improve relevant laws and regulations, clarify the responsibilities and powers of veterinarians in the field of public health, and strengthen supervision of veterinary work. Pay attention to global public health issues, strengthen international exchanges and cooperation, and jointly address the challenges of animal infectious diseases.

(4) Promote interdisciplinary research and cooperation, encourage veterinarians to collaborate with experts in other fields to jointly study the relationship between animal diseases and public health. Explore innovative technologies and methods, and utilize modern technological means to improve the efficiency and accuracy of veterinary work in the field of public health[5].

5. Discussion

Animal borne diseases pose a huge threat to human health, therefore the role of veterinarians in public health is crucial. In addition to treating and controlling animal diseases, veterinarians also bear an important responsibility for preventing animal infectious diseases. They effectively reduce the transmission of pathogens in animal populations by monitoring animal health status, implementing vaccination and hygiene measures. This not only helps to protect animal health, but also effectively reduces the risk of disease transmission to humans and maintains public health safety. Therefore, the role of veterinarians in public health cannot be underestimated and requires more recognition and support to ensure the health of both humans and animals.

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