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Popular Article

Emerging Diseases in Veterinary Public Health: An Overview of Epidemiological Aspects

¹Devender Choudhary ²Raghvendra Prasad Mishra ³Manohar Sain ⁴Rekha Lohiya ⁵Nikita

¹ Teaching Associate, Animal Biomedical Waste Disposal Technology Center, RAJUVAS, Bikaner

² Assistant Professor, Department of Veterinary Public health & Epidemiology, MB Veterinary College, Dungarpur

³ Assistant Professor, Department of Veterinary Medicine, CVAS, Bikaner

⁴ Teaching Associate, Department of Veterinary Public health & Epidemiology, CVAS, Bikaner

⁵ PG Scholar, Department of Veterinary Public health & Epidemiology, CVAS, Bikaner

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Abstract

Emerging diseases pose significant threats to both animal and human health, highlighting the importance of understanding their epidemiological aspects within the realm of veterinary public health. This abstract provides an overview of the key features and challenges associated with emerging diseases from a veterinary public health and epidemiological perspective.

Key words- emerging disease, risk factors, one-health

Introduction

Firstly, emerging diseases are characterized by their sudden appearance, rapid spread, and potential to cause substantial morbidity and mortality in animals. These diseases can be zoonotic, originating in animals and crossing species barriers to infect humans, or they may primarily affect animal populations. In either case, their impact extends beyond individual health, encompassing public health, economic, and societal consequences.

Significance of Epidemiology in Emerging Disease

Epidemiological surveillance and monitoring are crucial components of managing emerging diseases. Timely detection and reporting of outbreaks facilitate effective response strategies, such as implementing control measures, conducting contact tracing, and initiating targeted vaccination campaigns. Epidemiologists play a vital role in investigating the origin, transmission dynamics, and



risk factors associated with emerging diseases, enabling the development of evidence-based interventions.

Various factors contribute to the emergence of diseases in veterinary public health. Environmental changes, including deforestation, climate change, and urbanization, can disrupt ecosystems and bring animals into closer contact with humans, facilitating the transmission of pathogens. Additionally, globalization and increased international trade contribute to the rapid spread of infectious agents across borders.

The interdisciplinary nature of veterinary public health necessitates collaboration between veterinary professionals, public health authorities, and other stakeholders. Effective communication and information sharing between these groups are essential for early detection, risk assessment, and response coordination. Cooperation between different sectors, including animal agriculture, wildlife management, and human healthcare, is crucial to implement One Health approaches, recognizing the interconnectedness of human, animal, and environmental health.

Furthermore, the development and deployment of advanced diagnostic tools, including molecular techniques and surveillance systems, have significantly improved disease surveillance and response capabilities. Enhanced understanding of disease pathogenesis, host-pathogen interactions, and immunity further aids in the development of preventive measures, such as vaccines and biosecurity protocols.

Conclusion

In conclusion, emerging diseases pose significant challenges to veterinary public health and require a comprehensive and collaborative approach for effective management. Through robust surveillance systems, interdisciplinary cooperation, and scientific advancements, we can enhance our ability to detect, prevent, and control emerging diseases, mitigating their impact on animal and human health, as well as global health security.

