

Emerging Diseases in Poultry and their Management

Manosha Kim*

Department of Cell Biology, Hedmark University, Hedmark, Norway

DESCRIPTION

Poultry farming plays a vital role in global food production, providing a significant source of protein for millions of people. However, the industry faces growing challenges due to the emergence of new diseases, which threaten both the health of poultry and the livelihoods of farmers. These diseases often result from the interplay of intensifying farming practices, environmental changes and evolving pathogens. Understanding these emerging diseases and implementing effective management strategies are important for sustaining poultry production and safeguarding public health.

Nature of emerging poultry diseases

Emerging poultry diseases refer to illnesses that are newly identified or increasing in prevalence and geographic range. These diseases may arise from novel pathogens, mutations in existing pathogens, or changes in host susceptibility. Avian influenza, Newcastle disease and infectious bronchitis are prominent examples of diseases that have caused significant economic and biological impacts in the poultry industry.

The intensification of poultry farming practices, including high-density housing and large-scale production, creates conditions conducive to the spread of infectious agents. Moreover, globalization and trade facilitate the transboundary movement of pathogens, increasing the risk of disease outbreaks in previously unaffected regions. Environmental factors, such as climate change, can also alter the distribution and dynamics of vectors and pathogens, further complicating disease management.

Strategies for disease management

Effective management of emerging poultry diseases requires a multifaceted approach encompassing prevention, monitoring and response strategies. These measures aim to minimize the risk of outbreaks, ensure early detection and mitigate the impacts of disease spread.

Biosecurity measures

Implementing stringent biosecurity measures is the first line of defense against emerging diseases. These practices include

controlling access to poultry facilities, maintaining hygiene standards and preventing contact between domesticated poultry and wild birds. Proper disinfection protocols, quarantine procedures for new birds and the use of protective clothing can significantly reduce the risk of introducing pathogens into poultry flocks.

Vaccination programs are another critical component of biosecurity. Vaccines are available for several poultry diseases, including avian influenza and Newcastle disease and play an important role in reducing disease incidence and severity. However, vaccine efficacy can be influenced by factors such as pathogen evolution and improper administration, highlighting the need for ongoing research and monitoring.

Surveillance and early detection

Timely detection of emerging diseases is need for effective management. Surveillance systems should be established to monitor poultry health, track disease trends and identify potential outbreaks. These systems can involve routine health checks, laboratory diagnostics and molecular techniques to detect pathogens accurately.

The integration of advanced technologies, such as Artificial Intelligence (AI) and geographic Information Systems (GIS), enhances disease surveillance efforts. AI can analyze large datasets to predict disease outbreaks, while GIS can map the spread of diseases and identify high-risk areas. These tools enable authorities to implement targeted interventions and allocate resources efficiently.

Antimicrobial stewardship

The misuse of antibiotics in poultry farming has contributed to the emergence of Antimicrobial Resistance (AMR), complicating disease management. AMR occurs when pathogens develop resistance to commonly used antibiotics, rendering treatments ineffective. To address this issue, farmers and veterinarians must adopt antimicrobial stewardship practices, including the prudent use of antibiotics and alternative therapies.

Correspondence to: Manosha Kim, Department of Cell Biology, Hedmark University, Hedmark, Norway, E-mail: manosha@gmail.com

Received: 20-Nov-2024, Manuscript No. PFW-24-36743; **Editor assigned:** 22-Nov-2024, PreQC No. PFW-24-36743 (PQ); **Reviewed:** 09-Dec-2024, QC No. PFW-24-36743; **Revised:** 17-Dec-2024, Manuscript No. PFW-24-36743 (R); **Published:** 24-Dec-2024, DOI: 10.35248/2375-446X.24.12.289

Citation: Kim M (2024). Emerging Diseases in Poultry and Their Management. *Poult Fish Wildl Sci*. 12: 289.

Copyright: © 2024 Kim M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

Probiotic and prebiotic supplements, for example, can enhance the gut health of poultry and improve their immunity, reducing the need for antibiotics. Additionally, exploring natural

compounds and plant-based remedies offers potential avenues for disease prevention and control.