



Avian influenza in wild birds and mammals in the United States

Julianna B. Lenocho 

USDA National Wildlife Research Center, USA



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***Correspondence:**

Julianna B. Lenocho
julianna.b.lenoch@usda.gov

Abstract

Avian influenza, caused by influenza A viruses, has emerged as a critical zoonotic threat with implications for both public health and wildlife conservation. This abstract provides an overview of the prevalence, transmission dynamics, and potential impacts of avian influenza in wild birds and mammals within the United States. Drawing on comprehensive surveillance data and scientific studies, we highlight the diverse range of avian influenza strains circulating in wild bird populations and emphasize their potential spillover into mammalian species. The intricate interplay between wild birds, domestic poultry, and mammals in the context of avian influenza ecology is examined, shedding light on potential transmission pathways. Furthermore, we delve into the consequences of avian influenza outbreaks on both wild avian and mammalian species, elucidating the varying susceptibility and potential reservoir roles of different taxa. The function of migratory birds in the long-distance dissemination of avian influenza strains across geographical boundaries is explored, emphasizing the need for international cooperation in surveillance and response efforts. Additionally, we discuss the implications of avian influenza for public health and address the possibility of viral adaptation and reassortment events that may lead to novel strains with pandemic potential. We highlight the importance of early detection and robust surveillance systems to mitigate the risks associated with avian influenza outbreaks in both wildlife and human populations. In conclusion, this abstract underscores the critical need for interdisciplinary research and collaborative efforts between public health authorities, wildlife biologists, and veterinary experts to understand better the dynamics of avian influenza in wild birds and mammals in the United States. By elucidating these complex interactions, we aim to inform targeted interventions, policies, and strategies for effective prevention and control of avian influenza outbreaks in both wildlife and domestic animal populations.

Keywords: Influenza, Wild birds, U.S., Outbreak, Public health, Prevention and control

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