



Effects of Chronic Wasting Disease on Deer Populations in Wisconsin Using Spatiotemporal Exploration

Jacob Eyler*

Department of Entomology, University of Delaware, Newark, United States of America

DESCRIPTION

Deer Disease Surveillance, Wisconsin deer, and Chronic Wasting Disease (CWD) are all terms used to describe an increasingly prevalent condition that is slowly spreading among deer populations. CWD affects white-tailed deer, mule deer, elk, and other cervid species. In recent years, it has become an increasingly common problem in Wisconsin deer populations. Spatiotemporal analysis is a tool being used to assess the impacts of CWD on Wisconsin's deer. This analysis allows for more detailed modeling of the disease's geographic spread which can provide valuable insights into managing the condition.

Spatiotemporal analysis provides the ability to model the spread of CWD geographically over time by incorporating both Geographic Information Systems (GIS) and temporal data collected from surveillance programs across multiple states including Wisconsin. By combining this data and mapping it spatially using GIS software programs such as ArcGIS or QGIS can develop models that estimate the risk of CWD for specific locations at different times throughout the year. These models give a better understanding of how disease outbreaks occur and spread geographically so they can better manage them in order to reduce their impacts on wildlife populations.

Chronic Wasting Disease (CWD) is a fatal neurological disorder that affects deer species, including the white-tailed deer in Wisconsin. Due to the severity and rate of spread of CWD, it is necessary to monitor and assess the impacts this disease has on deer populations in Wisconsin. However, there are several challenges associated with surveillance and monitoring of CWD in Wisconsin. These include limited resources for sampling, inadequate access to data sets, insufficient mapping capabilities, and lack of collaboration between local agencies and organizations. In order to effectively monitor and assess the impacts of CWD on white-tailed deer populations in Wisconsin, spatiotemporal analysis must be employed. Spatiotemporal analysis involves analyzing spatial information over a period of time to understand the dynamics between different variables over space and time. By using spatiotemporal analysis, resources can be

allocated more efficiently while allowing for greater accuracy when assessing population trends due to CWD. Deer Disease Surveillance must be done through rigorous collection and analysis of data from both healthy and infected deer populations across various regions in Wisconsin. The data collected must then be used to create an accurate map showing where CWD is most prevalent within the state's deer populations. Chronic Wasting Disease (CWD) is a highly contagious disorder that affects deer populations in many parts of the United States, including Wisconsin. Deer Disease Surveillance, Wisconsin deer, and Chronic Wasting Disease are all important elements when assessing the impacts of CWD on local deer populations.

To effectively evaluate CWD's impacts, Wisconsin wildlife officials have employed spatiotemporal analysis techniques to map out areas of infection and disease spread. Spatial analysis involves analyzing data in a geographic context. This type of analysis can be used to identify areas where CWD is present or is likely to become present. Spatiotemporal analysis is especially beneficial in this context because it enables authorities to take a long-term view of the disease's effects on deer populations. In addition to providing an overview of the current situation, spatiotemporal analysis allows wildlife officials to predict future trends in CWD prevalence and spread. This predictive ability is invaluable when it comes to understanding and managing outbreaks of deadly diseases like CWD. In addition to predicting trends, spatiotemporal analysis can also help identify possible causes or sources of infection within a given area. By analyzing information such as land use patterns, deer movement behavior, environmental factors, and other variables related to CWD transmission patterns can identify potential sources or causes that might have resulted in an outbreak. Having this type of knowledge makes it easier for authorities to target specific areas with management strategies aimed at minimizing future outbreaks or preventing them from occurring altogether. All things considered, utilizing spatiotemporal analysis for CWD surveillance can provide valuable insight into disease prevalence and spread among Wisconsin's deer population. Through long-

Correspondence to: Jacob Eyler, Department of Entomology, University of Delaware, Newark, United States of America, Email: jacobey@gmail.com

Received: 02-Nov-2023, Manuscript No. TPMS-23-23351; **Editor assigned:** 06-Nov-2023, PreQC No. TPMS-23-23351 (PQ); **Reviewed:** 20-Nov-2023, QC No. TPMS-23-23351; **Revised:** 27-Nov-2023, Manuscript No. TPMS-23-23351 (R); **Published:** 04-Dec-2023, DOI: 10.35248/2329-9088.23.11.331

Citation: Eyler J (2023) Effects of Chronic Wasting Disease on Deer Populations in Wisconsin Using Spatiotemporal Exploration. Trop Med Surg. 11:331.

Copyright: © 2023 Eyler J. 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.

term monitoring and predictive modeling techniques can better understand what factors influence disease emergence in a given area so that appropriate interventions can be made. This kind of comprehensive data collection is essential for ensuring the health and safety of our local wildlife population amid the on-

going threat posed by Chronic Wasting Disease. Furthermore, population-level studies need to be conducted that examine factors such as herd density, age structure, and habitat quality that could influence prevalence or mortality rates associated with CWD infection.