

Impact of Climate Change on Infectious Disease Dynamics

Chris Nelson
PhD
University of São Paulo
Av. Prof. Luciano Gualberto, 380 - Butantã, São Paulo - SP, 05508-010, Brazil

Kai Jones
PhD
University of Cape Town
Rondebosch, Cape Town, 7700, South Africa

Alex Robinson
PhD
Tsinghua University
Haidian District, Beijing 100084, China

Abstract. This research article focuses on the impact of climate change on the dynamics of infectious diseases. It highlights how changes in temperature, humidity, and weather patterns can alter the transmission rates and geographic distribution of diseases such as malaria, dengue, and Zika virus. The study emphasizes the need for adaptive public health strategies to mitigate these effects and protect vulnerable populations. By understanding the link between climate variables and disease spread, policymakers can better prepare for future public health challenges.

Keywords: Climate Change, Infectious Diseases, Public Health, Disease Transmission, Global Health

Introduction

Climate change is increasingly recognized as a significant factor influencing the spread and dynamics of infectious diseases. Rising temperatures, altered precipitation patterns, and increased frequency of extreme weather events can affect the life cycles of pathogens and vectors, such as mosquitoes, which in turn impacts disease transmission dynamics. This article examines the current evidence linking climate change to shifts in the prevalence and distribution of infectious diseases, including malaria, dengue fever, and the Zika virus. It also discusses the implications for public health systems and the importance of developing adaptive strategies to mitigate the impact of these changes on vulnerable populations. Understanding these connections is crucial for enhancing global health security and preparing for future challenges posed by climate-induced shifts in disease dynamics.

This is a preliminary version. To read the full version of the article, please purchase a subscription.

References

1. Viroliya, K., Hojjat, A., Pena, B., Bhatt, H., Mehta, N. N., Venkata, S. Y., ... & Palabindela, P. (2023). Sa1359 *HELICOBACTER PYLORI* ASSOCIATED GASTRO-INTESTINAL BLEEDING IN BARIATRIC SURGERY-NATIONWIDE SURREY. *Gastroenterology*, 164(6), S-373.