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Enhancing outbreak communication via digital platforms: A social media analytics approach

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Introduction

The COVID-19 pandemic highlighted the transformative role of digital platforms in public health communication, presenting both opportunities and challenges. Effective outbreak communication requires the timely dissemination of information, real-time monitoring of public sentiment, and mitigation of misinformation to improve response coordination.

Methods

This study conducted a comprehensive literature review and methodological analysis, synthesizing empirical data from past outbreaks, including COVID-19, Ebola, and Zika. Techniques such as social media analytics, social listening, and sentiment analysis were examined to assess their utility in enhancing risk communication strategies and community engagement.

Results

Findings indicate that integrating social media analytics into outbreak communication enables adaptive, data-driven approaches that improve information transparency and public trust. Key benefits include real-time monitoring of public sentiment and identification of misinformation trends. Challenges identified include data quality concerns, ethical considerations, and the need for culturally sensitive frameworks to ensure inclusivity.

Conclusion

A multidisciplinary and culturally adaptive communication framework that leverages digital tools can significantly enhance outbreak response efficacy. Emphasizing stakeholder engagement and ethical use of data promotes resilience and preparedness for future health crises, reinforcing the vital role of digital platforms in global health communication.