



Anticipating health crises in the age of the infodemic: The contribution of artificial intelligence-assisted information monitoring in the Democratic Republic of Congo

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Context: The Democratic Republic of Congo (DRC) faces recurring public health emergencies, including major epidemics, humanitarian crises, and natural disasters, in a context marked by the fragility of its health information systems. Simultaneously, the infodemic - characterized by the rapid proliferation of rumours, misinformation, and unverified content - significantly undermines prevention, preparedness, and response efforts, particularly in resource-limited and health-literacy settings. This study aims to present the implementation and initial performance of an information monitoring and infodemic management unit at the School of Public Health of the University of Lubumbashi, as an innovative tool for strengthening early warning systems and risk communication.

Methods: An integrated approach was developed, combining digital media and social network monitoring, community-based collection of perceptions and weak signals, and artificial intelligence-assisted analysis to identify emerging trends. The data were triangulated with epidemiological surveillance systems to improve the relevance and responsiveness of alerts.

Results: Initial analyses identified recurring patterns of misinformation related to vaccines, treatments, and the origins of diseases. The use of digital tools has facilitated the rapid detection of emerging rumours and strengthened the effectiveness of community communication strategies.

Conclusion: Institutionalizing infodemic management is a key lever for strengthening the resilience of health systems in the DRC. Targeted investments in appropriate technologies, training, and community engagement are essential to maximize its impact in resource-limited settings.

