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Narrative Trends over the COVID-19 Pandemic: Digital Social Listening to Inform WHO Infodemic Management

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Abstract. The COVID-19 infodemic is an overwhelming amount of information that has challenged pandemic communication and epidemic response. WHO has produced weekly infodemic insights reports to identify questions, concerns, information voids expressed and experienced by people online. Publicly available data was collected and categorized to a public health taxonomy to enable thematic analysis. Analysis showed three key periods of narrative volume peaks. Understanding how conversations change over time can help inform future infodemic preparedness and prevention planning.

Keywords. Social listening, infodemic, COVID-19, pandemic response, pandemic preparedness, social media, taxonomy

1. Introduction

The infodemic accompanying the COVID-19 pandemic has led to an overwhelming about of information, particularly on social and other media [1]. The infodemic can lead to confusion, reduced trust in health authorities and an increase in risk-taking behavior. As part of understanding and managing the infodemic, WHO has worked with partners to produce weekly digital infodemic intelligence reports since February 2020. This communication outlines data collection and narrative peaks between March 2020 and October 2022.

2. Methods

Publicly available social and news media data is collected from Meltwater and CrowdTangle on a weekly basis in English, French and Spanish. These data are categorized to a public health taxonomy which has 5 overarching categories (the cause of the virus, the illness, the treatment, the interventions and perceptions on information) and 42 sub-categories [1]. As well as analysis of data volume, data analysis reporting

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also includes information voids, top questions, and data velocity to identify rising topics. Data within categories is analyzed qualitatively to identify narrative trends.

3. Results

Between March 2020 and October 2022, over 1.88 billion global social media posts were identified that mentioned COVID-19. Between January 2021 and October 2022, 381 million posts discussed COVID-19 vaccines, making it the most prominent topic of conversation. There were three key periods associated with high data volumes. A peak in March – April 2020 was conversation driven by misinformation and conspiracy theories about the origin of COVID-19, discussion about the impact of socio-economic factors and underlying conditions on COVID-19 reported deaths, and discussion about efficacy of unproven treatments. In October 2020, a large spike in the 'Personal Measures' category was driven by conversations about the use of protective equipment, transmission risk, and the severity of COVID-19. Finally, between December 2021 and January 2022, Omicron-related narratives were most discussed. In addition there were discussions about travel restrictions, debate about the severity of Omicron, and if this variant indicated we were moving towards an endemic phase. There were also narratives regarding vaccination, which brand of vaccine was best for a booster dose, as well as frustration at the spread of vaccine questioning misinformation.

4. Discussion

Using a taxonomy to digital social listening has enabled better understanding of global narratives, concerns and information voids throughout the pandemic. Analysis of narratives trends and volume peaks has shown how conversations change over time as knowledge about COVID-19 increased, as the epidemiology of the disease evolved, and as vaccines and public health and social measures were used. Understanding these trends offer lessons for future preparedness and prevention planning.

5. Conclusion

Digital social listening can provide useful insight into how citizens are experiencing an emergency, and their information and other needs. Using a public health taxonomy has enabled infodemic managers to triangulate with other data sources and translate insights faster into recommendations.

References

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