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### Misinformation: The Effects on Past and Future Outbreaks

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# Abstract

Misinformation is a major challenge in addressing large-scale acute infectious outbreaks and has been shown to encourage vaccine hesitancy and decreased vaccination rates. This study examines the effects of misinformation on vaccine hesitancy by comparing studies from past and present outbreaks. Specifically, I investigate the following research question: What are the effects of misinformation on vaccine hesitancy during past and current outbreaks and what are effective preventative measures? I analyze a range of studies using a systematic review approach to identify similarities and differences in the spread of misinformation across outbreaks. My findings shed light on how and why misinformation spreads and the effects it has on combating disease. The implications of my study are significant, as the World Health Organization has ranked misinformation as one of the top ten threats to global health. By identifying patterns and potential solutions, my study contributes to the larger conversation about addressing misinformation and vaccine hesitancy.

## Methods

- Literature review of relevant sources
- CDC information on the threats of misinformation
- Articles analyzing the harm of misinformation on certain outbreaks
- Comparing the effects of misinformation on past outbreaks to current
- Making a plan based on past outbreaks to minimize the harm of misinformation in the future

# The Effects of Misinformation on Past and Future Outbreaks **Bobby Ambrosino** Faculty Mentor: Dr. Sonja Kim Pandemic II (AAAS 280Q-01) Spring 2023

## Results

This study found that misinformation does lead to vaccine hesitancy and refusal. There has been a trend for over the last 100 years that links misinformation to decreased public compliance with public health guidelines. This study also links misinformation being spread by influential figures to increased consumption of misinformation and increased public belief of conspiracy theories, making misinformation in the age of social media even more harmful. It was also found that the most effective way to prevent the spread and harm of misinformation for future outbreaks is through a variety of previously used tactics, such as fact checks on social media and local trustworthy medical professionals talking to the public about what must be done. More studies must be done on how to best implement this.

# **Research Questions**

current outbreaks? misinformation for future outbreaks?

Social media platforms need to strictly monitor posts being made about diseases in times of outbreak. Since it is proven that misinformation does lead to vaccine hesitancy, social media platforms need to do everything in their power to promote correct information and stop the spread of misinformation. Furthermore, local governments should attempt to have trusted medical professionals speak to locals in order to give them proper information on safety protocols. Since it has been found that medical professionals are still the most trusted source of information during outbreaks, they should be the ones talking to people about the public health guidelines in place at the time. Overall, we need to be more prepared for outbreaks and have a better plan for stopping the spread of misinformation.



## What are the effects of misinformation on past and

- How will misinformation affect future outbreaks?
- What is the most effective way to prevent

## Conclusion

## References

