Multidisciplinary Approach to Studying Two Social Media Communication Scenarios Related to Public Health

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Broad Goals

- To apply a multidisciplinary approach to understanding the diffusion of social media messages and corresponding real-world behaviors.

- To understand how social and behavioral theories commonly used in health research inform and predict the diffusion of social media messages and corresponding real-world behaviors.

Two Scenarios

1. Collaborative social media outreach system with the San Diego County Office of Emergency Services (SD OES).

2. Analysis of Twitter messages, communications, and behaviors related to California vaccine exemption bill SB277.

SD OES Social Media Emergency System Study

Goal

- To understand how information spreads across social media during natural disasters, in this case, San Diego wildfires.

SD OES Social Media Emergency System Study

- Enroll 1,000 Twitter users in San Diego to participate
  - 500 influential users identified through social media analysis of the speed, scale and range of their messages
    - Examples: local news stations, businesses, athletes, celebrities
  - 500 additional users
    - Examples: community and religious organizations, school personnel, bands and recreational organizations, non-English speaking organizations

SD OES Social Media Emergency System Study

- Volunteer participants will be asked to retweet San Diego County OES's emergency warning alerts and messages in the event of a wild fire.

- How OES alerts and messages spread through social networks over Twitter will be analyzed within the framework of the Multilevel Model of Meme Diffusion.

- Twitter messages related to the wild fire event that are not OES generated messages will be content analyzed for social and behavioral theory constructs and linked with social media and real world behaviors.

SD OES Social Media Emergency System Study

Current status

- IRB approval for the study has been obtained.

- Next step is to figure out who will be asked to participate in the study.

- Will conduct analysis of top influential Twitter users in San Diego.

- Will conduct outreach activities to enroll participants.

Twitter Communications and Behaviors Related to SB277

Goal

- To understand social media (Twitter) messages and communications related to SB277 and how these related to real-world behaviors.

Twitter Communications and Behaviors Related to SB277 – Plan

- Analyze Twitter messages related to SB277 and vaccine-related real-world behaviors using a multidisciplinary approach

  - GIS and spatiotemporal analysis

  - Communication analysis (M3M model)

  - Linguistic analysis

  - Public health & behavioral analysis

Twitter Communications and Behaviors Related to SB277 – Next Steps

- Conduct comprehensive literature review.

- Collaborators will generate research questions / hypotheses specific to their domain.

- Develop codebook.

- Begin to analyze tweets.

- Correlate tweets with real-world behaviors (e.g., region-specific vaccination rates.