

Addressing Inaccurate Health Information

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DIVISION OF COMMUNICATION SCIENCE AND SERVICES

1. CDC's interest in inaccurate health information

2. Pre-emptive inaccurate health information interventions

3. Reactive inaccurate health information interventions

4. CDC's approach to inaccurate health information

8 Ways Inaccurate Health Information Undermines Public Health Recommendations

1.Spreading of False Information can confuse people and lead them to make decisions that are not based on accurate knowledge.

2.Erosion of Trust occurs because are exposed to conflicting information, they can become skeptical of official recommendations.

3. Reduced Adherence to Guidelines to public health recommendations.

4. Unnecessary Fear or Complacency causes anxiety and unnecessary behaviors or downplays the seriousness of public health threats.

8 Ways Misinformation Undermines Public Health Recommendations

5.Promotion of Unproven Remedies can lead individuals to opt for unverified solutions, delaying appropriate medical care.

6.Amplification of Conspiracy Theories can lead people to reject proven interventions and adopt unproven and potentially harmful practices.

7.Challenges in Behavior Change as misinformation can decrease motivation to make changes, as they might be influenced by incorrect beliefs.

8.Overwhelmed Healthcare Systems as misinformation can lead to panicbuying, hoarding medical supplies, and unneeded provider visits, which can strain healthcare systems and divert resources away from critical priorities.

Key concepts and definitions

Infodemic

An overabundance of information in digital and physical space –including mis/disinformation– accompanying an acute health event such as an outbreak.

Information Ecosystem

The exchange of information and communication in a digitized society

Unsettled Science

An absence of definitive answers or scientific updates to questions that people are seeking answers to

Message Penetration

Ability of a person to receive and understand information as intended

Info Voids

People seeking information but find a lack of credible sources

Rumor

Information, inaccurate or accurate, circulated within a network

Misinformation

Information that is inaccurate

Disinformation

Misinformation specifically designed to achieve an agenda

Information Overload

A person being overwhelmed with information which can cause confusion or difficulty to act on guidance

Monitoring Misinformation

Human-based Content Monitoring

• Traditional social media and news media monitoring, surveys, focus groups, and interviews

Traditional Perception Monitoring

• Surveys, focus groups, key informant interviews

Artificial Intelligence and Machine Learning Monitoring

- Creation and use of data-trained models to identify misinformation with relatively minor human oversight
- Guo, B., Ding, Y., Yao, L., Liang, Y., & Yu, Z. (2019). The future of misinformation detection: new perspectives and trends. arXiv preprint arXiv:1909.03654.
- Purnat, T. D., Vacca, P., Czerniak, C., Ball, S., Burzo, S., Zecchin, T., ... & Nguyen, T. (2021). Infodemic signal detection during the COVID-19 pandemic: development of a methodology for identifying potential information voids in online conversations. JMIR infodemiology, 1(1), e30971.

Pre-emptive Approaches to Misinformation

Prebunking

- CDC Myths and Facts pages
- Occasional mass communication efforts

Psychological Inoculation

- US Department of Homeland Security's Resiliency Bytes
- Elevating partners' messages within our nework



Roozenbeek, J., Suiter, J., & Culloty, E. (2022). Countering Misinformation: Evidence, Knowledge Gaps, and Implications of Current Interventions. PsyArXiv Preprint: 10.31234/osf.io/b52um



Pre-emptive Approaches to Misinformation

Literacy Interventions

- Adapting health information literacy courses for a general audience
- Developing media, information, digital, and science literacy courses

Building Societal Resiliency

- NOFO: Increasing vaccine confidence and building community trust using a communitybased participatory research approach
- Infodemic management trainings



 Norri–Sederholm, T., Norvanto, E., Talvitie–Lamberg, K., & Huhtinen, A. M. (2020). Misinformation and Disinformation in Social Media as the Pulse of Finnish National Security. In Social Media and the Armed Forces (pp. 207-225). Springer, Cham.
 Roozenbeek, J., Suiter, J., & Culloty, E. (2022). Countering Misinformation: Evidence, Knowledge Gaps, and Implications of Current Interventions. PsyArXiv Preprint: 10.31234/osf.io/b52um



Reactive Approaches to Misinformation

Debunking

- Updating CERC framework
- Meltwater/Blackbird AI Tool
- Tagging and Removal
 - Not in CDC's scope
 - Currently under litigation





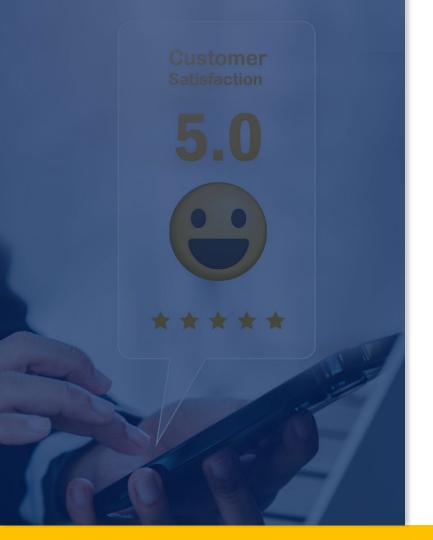
 Ecker, U.K.H., Lewandowsky, S., Cook, J. et al. The psychological drivers of misinformation belief and its resistance to correction. Nat Rev Psychol 1, 13–29 (2022). https://doi.org/10.1038/s44159-021-00006-y

Current Overall Landscape Academia HHS Countries Other Consumer USG Advocate Orgs Civil STLT Society Fact Health Checking Depts Orgs Office of Readiness & Response CDC Tech **Partners** Surgeon General Office of **Communications** WHO **Center for NCIRD** Global Health

CDC's Approach to Inaccurate Health Information

- Focus on questions, concerns, and information voids
- **Debunk, prebunk,** and **inoculate** when appropriate
- Prevention is primary
- Building **trust** and being **responsive** to the public's information needs
- Reducing the impact of and resiliency to inaccurate health information





What is CDC's Plan?

- Act through agency communication channels and partners
- Encourage trust in CDC's mission and its science to increase healthy behaviors and advance the public's health

What CDC is Doing...

- Creating systems and tools to monitor and rapidly alert
 - CDC Online Health Narrative Alert System
 - Communicators Playbook
 - National Health Knowledge Research and Response System
 - Predicting impact of emerging misinformation
- Increase partners' capacity to categorize information and respond in a timely manner



CDC Online Health Narrative Alert System

Meltwater and Blackbird AI have or are developing the following additional features in the native Meltwater platform:

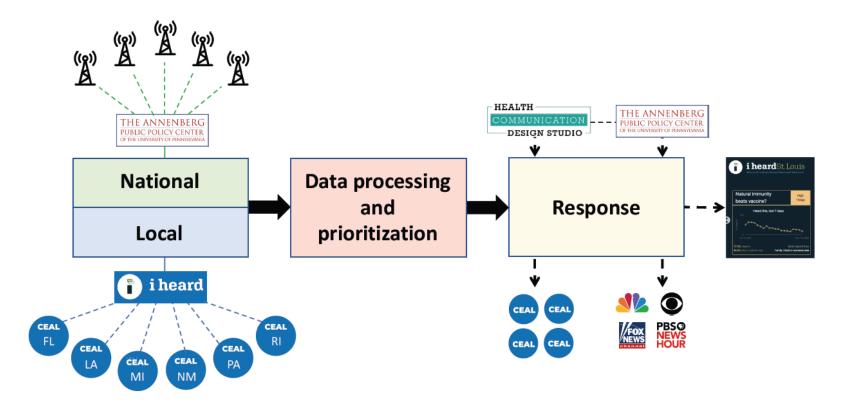
- 1. Al-generated reports that rate narratives based on the risk to agency priorities.
- 2. Integrated ability to identify misinformation through NewsGuard.
- 3. Weekly narrative reports across 8 topics (+3 for emergencies) covering the previous 7 days.
- 4. Alerts for health misinformation and viral narratives when detected in real-time.
- 5. On-demand Crisis Topic Reports (24-48hr delivery)

CDC's Priority Public Health Topics for Inaccurate Information

- 1. Pan-Respiratory Virus Season
- 2. Narrative Impacting Trust in CDC
- 3. Overdose and Addiction
- 4. Sexual Violence and Intimate Partner Violence
- 5. Suicide and Firearms

- 6. Sexual Health
- 7. Food and Waterborne Disease
- 8. Natural and Non-natural Hazards/Emergencies
- Lead Poisoning
 Vaccines

Health Knowledge Monitoring and Response System



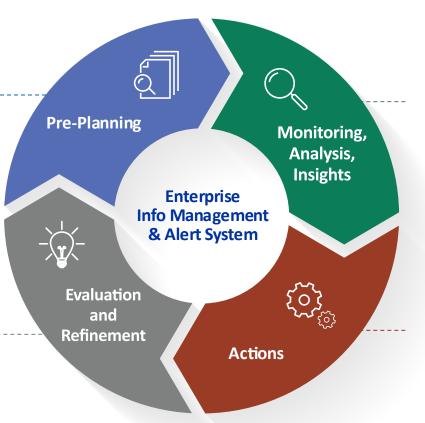


Addressing Health Misinformation

- Working across government to implement coordinated approaches
- Developing and using the emerging evidence base
 - <u>Chan & Albarracín. (2023). A meta-analysis of correction effects</u> <u>in science-relevant misinformation. Nature Human Behaviour, 1-</u> <u>12.</u>
 - Chan, Jones, Hall Jamieson, & Albarracín. (2017). Debunking: A meta-analysis of the psychological efficacy of messages countering misinformation. Psychological science, 28(11), 1531-1546.
- Collaborative and coordinated efforts to support prevention and resiliency-building efforts
- CDC's development of a research and learning agenda

CDC's Action Plan

- Assess risk in rollout topics/editorial calendars, historical experiences with topic
- Use data from ecosystem (i.e. social media, survey data, CDC-INFO, behavioral science)
- Determine monitoring and alerting strategy, advance message testing
- Affirm response roles/actions and engage partners and influencers
- Assess narrative(s), metrics, refine monitoring
- Assess emerging messaging needs
- Assess audience and partner inputs and refine strategy
- **Convene** internal stakeholders and determine next steps



- Analyze and disseminate monitoring digests
- **Refine** monitoring strategy and revise messages (i.e. social media, talking points etc.)
- Conduct audience research
- Brief stakeholders and discuss response

- **Convene** internal stakeholders (i.e. social media, program, spokespeople)
- Affirm action steps and best practice by channel for current situation
- Engage partners in response
- Monitor data inputs (i.e. CDC-INFO, partner feedback, survey findings)

Understanding underlying the public's information needs and developing programmatic and communications approaches that meets these needs is critical to building confidence in vaccines.

COVID-19 State of Vaccine Confidence Insights Report

a express a renewed sense of hope and optimits nder to regisen som excention nener anterg communitien är cases, nener than conferences long til access human, ik belog fremeslingly highlagheid. At a muld, sinastanal issues are often belog uties of colos, rather than Tactics by tech companies to manage misindomation often do little to combat its terms. Recent data suggest that those who do not intend to get vaccinated to safety and mitigation guidelines, further polarizing the fully vacrinat Vaccination status, conversations about "vaccine paraports" are contribthese groups. New studies with COVID-19 survivors investigating their immune response t two dose vaccines raised consumer confusion about whether partial vaccination

ut the virus that causes COVID-19. tate, and local pertners should continue to work topp in information, and contrast relationmation with evidence-based mental n gapt in intermutant, with common mean-instant water example a first mean of a part of the second sec The goal of these efforts to to increase considence in COMD-16 vectors and expand vector uptale ren-boardy. Efforts should be made to engage and deploy trucked messengers who consect with under van the community specific factors contributing to low vaccine uptake; and slow the spread of

- 2 Aims and Methods
 - stural and practical barriers. nt tactics for addressing
 - ine are insufficient. te who are fully vaccinate ue to adhere to COVID
 - Emerging Themer Continuing and Evolving Thernes

Appendix Inputs and Sources

ase Control & Prev OVID-19 Response, Vaccine Task Force



COVID-19 State of Vaccine Confidence Insights Report | Report 4 | March 20, 2021 COND-19 State of VacCine Confidence Insights Report | Bagort 4 | March 29, 202 Emerging Themes eccine status and "vaccine passports" are contributing to division Vaccine hesitancy concerns are disguising structural and practical barriers. and polarization.

Newly released data create confusion about whether partial vaccination offers protection against the virus that causes COVID-19. Concerning News, 2020; Francisco D. M. Description of Nethington, IC Marcel & Registra Discontinues interesting News, 2020; Francisco D. M. Discontinues of Nethington, IC Marcel & Registra D. Marcel Proc. 1999; A. S. Discontinues of Nethington, Netherland, Netherland,



Thank You!

For more information, contact CDC 1-800-CDC-INFO (232-4636) TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



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