Addressing Inaccurate Health Information

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Today's Talk

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 panic-buying, 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 community-based 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
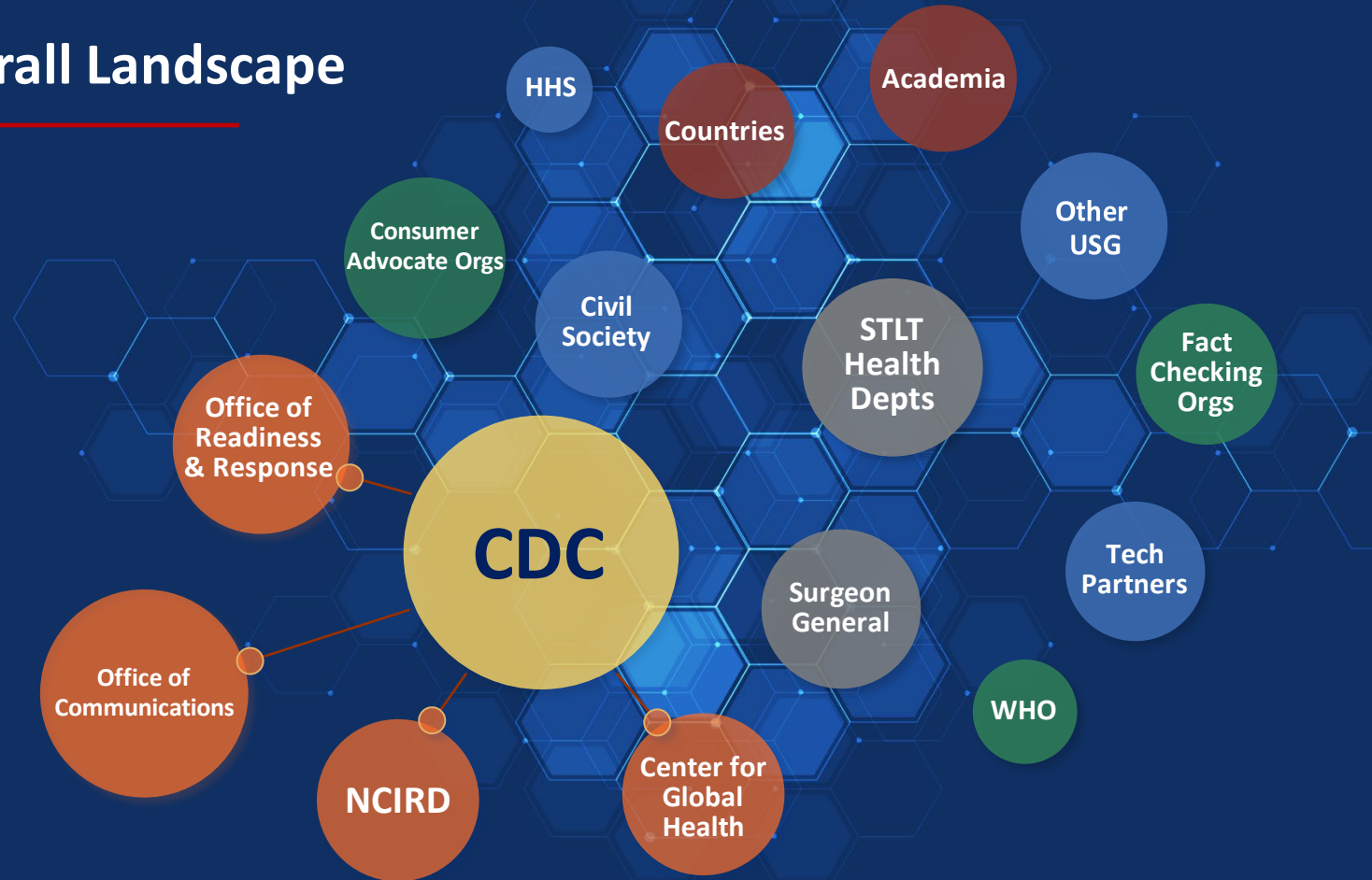
Reactive Approaches to Misinformation

- **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

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
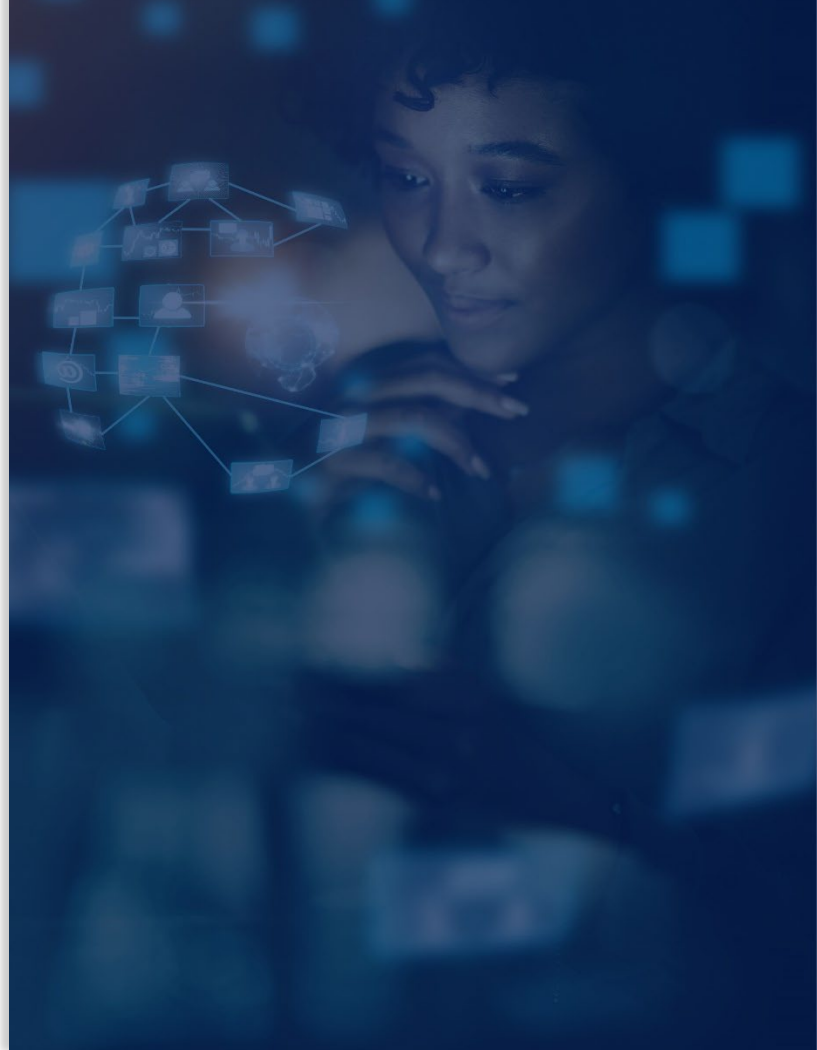
CDC Online Health Narrative Alert System

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

1. AI-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
9. Lead Poisoning
10. Vaccines

Health Knowledge Monitoring and Response System
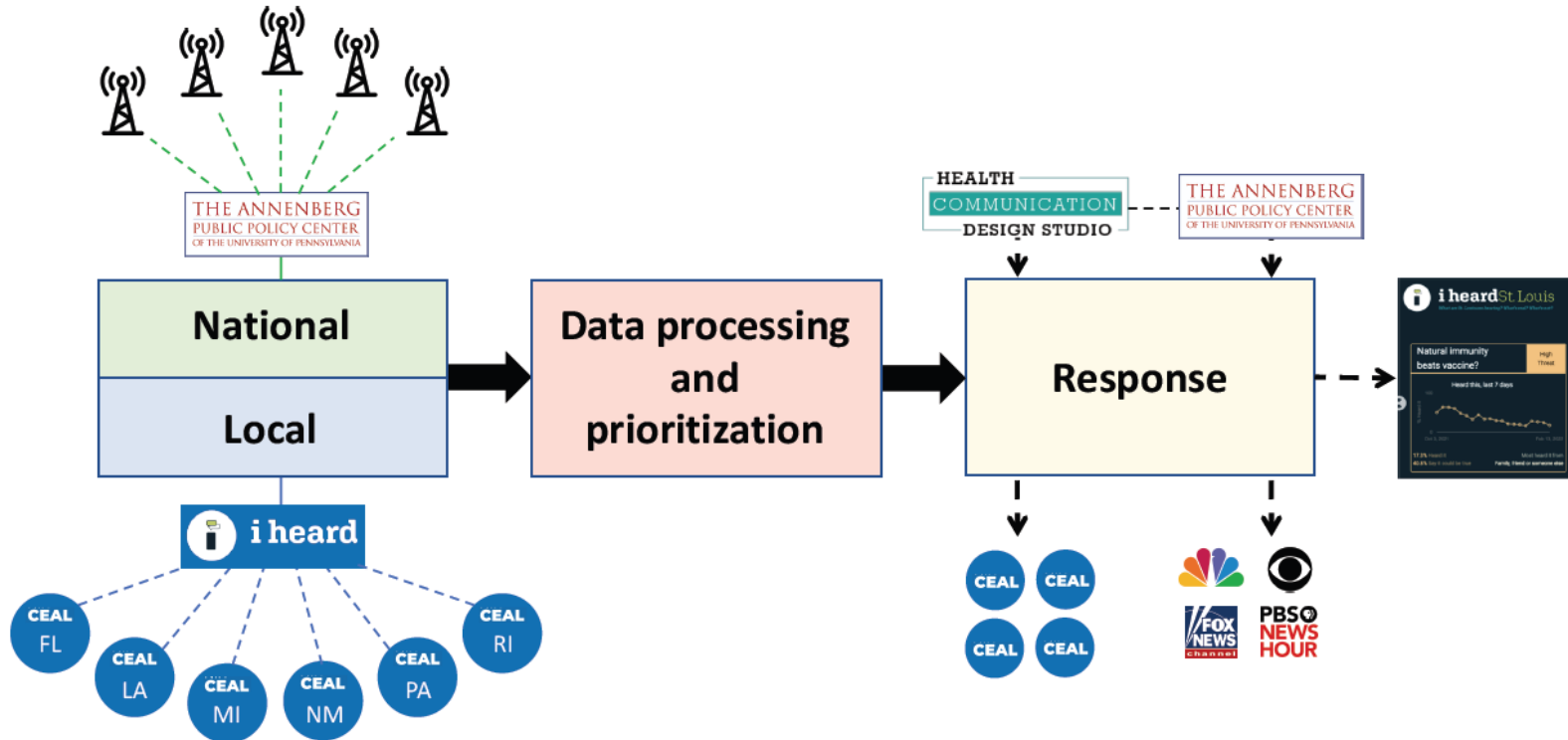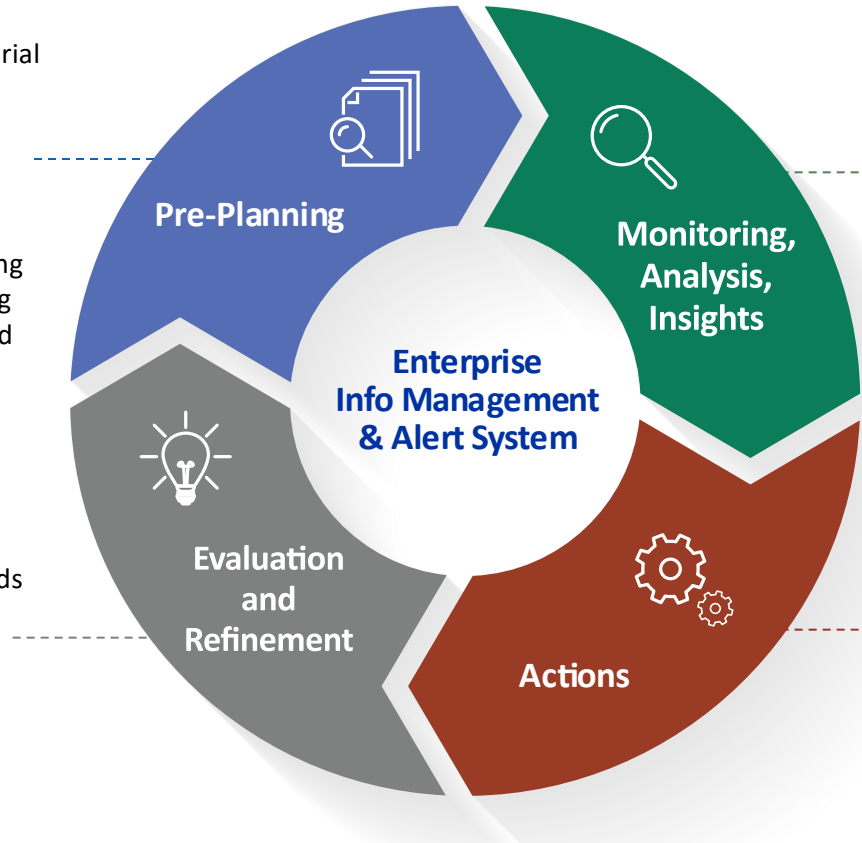
Addressing Health Misinformation

- Working across government to implement coordinated approaches
- Developing and using the emerging evidence base
  - Chan & Albarracín. (2023). A meta-analysis of correction effects in science-relevant misinformation. Nature Human Behaviour, 1-12.
  - 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

Pre-Planning

- **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

Monitoring, Analysis, Insights

- **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

Enterprise Info Management & Alert System

Evaluation and Refinement

- **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

Actions

- **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.

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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