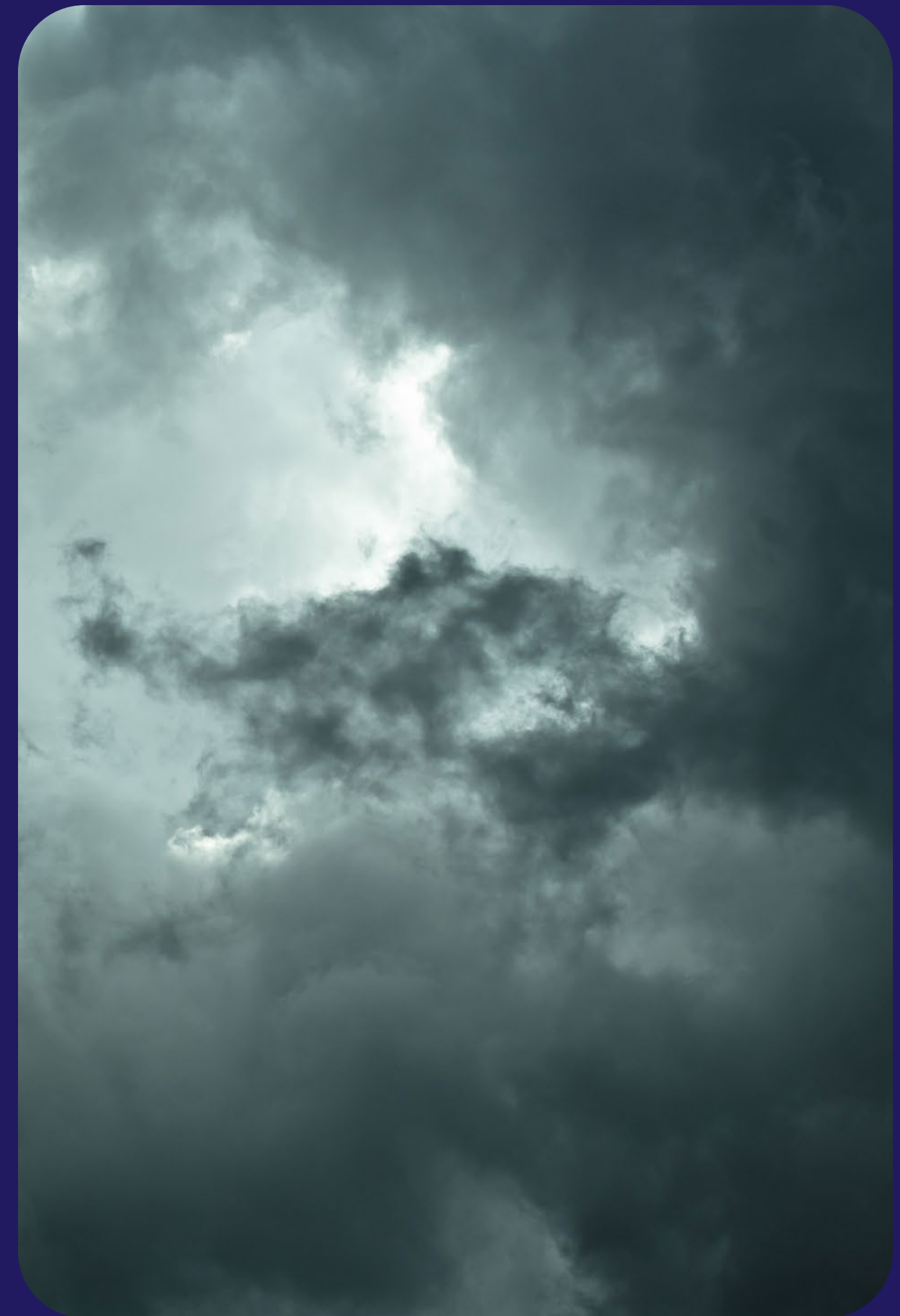


THE AI APOCALYPSE
HAS BEEN CANCELED:
HOW GENERATIVE AI
CAN PROMOTE A
HEALTHIER WORLD

TINA PURNAT

Public Health Association of British
Columbia Conference 2023



HEALTH SYSTEM & HEALTH INFORMATION



Hype vs doom of generative AI

Hype from private sector matched by concern in governments can make it challenging to discern the true potential harms and uses of generative AI for public health.



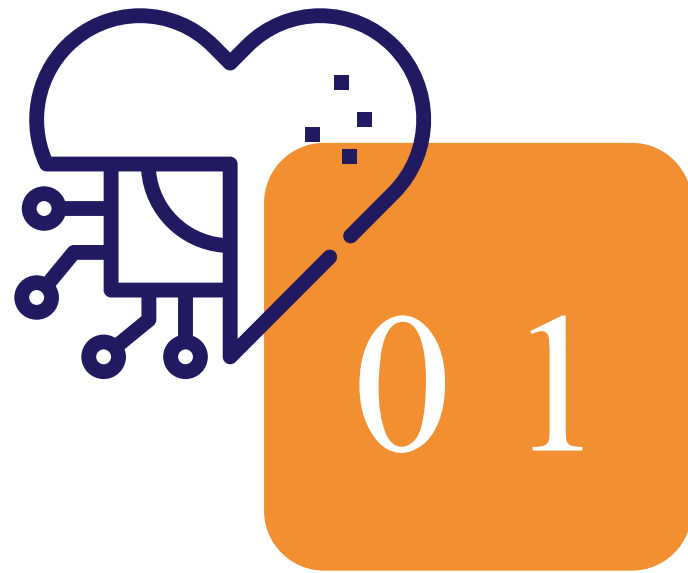
Trustworthy public health and health system

Health systems and pandemic preparedness need to focus on building trust, acceptance and uptake of services, products and health guidance.



Addressing health misinformation

Strategies to address asymmetries in the information environment and health misinformation are multilevel, and multidisciplinary.



Hype vs doom of generative AI

Hype from private sector matched by concern in governments can make it challenging to discern the true potential harms and uses of generative AI for public health.

ChatGPT Quickly Authored 100 Blogs Full of Healthcare Disinformation

— But Google Bard and Microsoft Bing had guardrails in place to thwart such prompting

by [Michael DePeau-Wilson](#), Enterprise & Investigative Writer, MedPage Today November 13, 2023

Generative AI in Healthcare Market To Reach USD 16.4 Billion By 2032, Says DataHorizon Research

The emergence of innovative technologies to drive generative AI in Healthcare.

November 03, 2023 07:40 ET | Source: [DataHorizon Research](#)

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The machine runs amok



Bod
y

Challenges in the information environment need to be identified and addressed.

Science-Based Medicine

Retracted papers about COVID-19 are more highly cited than they should be

Changing recommendations for boosters lead to confusion for the vaccinated and their doctors

Why Bad Science Is Sometimes More Appealing Than Good Science

Researchers cite studies that can't be replicated weirdly often



A shockingly large majority of health news shared on Facebook is fake or misleading

Hyperbolic rhetoric about fentanyl stifles responsible policymaking

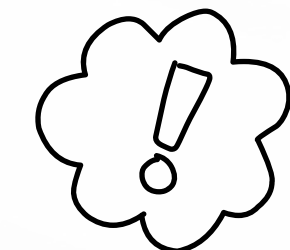
How science helps fuel a culture of misinformation

We tend to blame the glut of disinformation in science on social media and the news, but the problem often starts with the scientific enterprise itself.

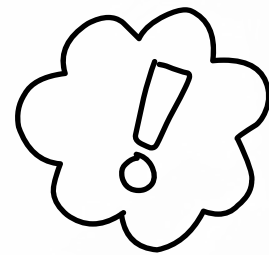
'I felt betrayed': Health influencers are gaining notoriety for lies and lawsuits over deceptive marketing and claims that are too good to be true

Mixed Messages And Sudden Policy Changes Sow Confusion, Opposition To Covid Guidelines

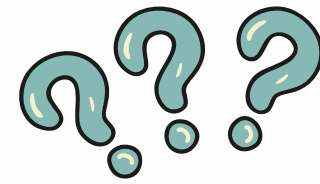
Amid contradictory laws, hospitals in one state were unable to explain policies on emergency abortion care, study finds



Challenges in the information environment need to be identified and addressed.



deceptive marketing in health



hyperbolic press coverage

infodemic

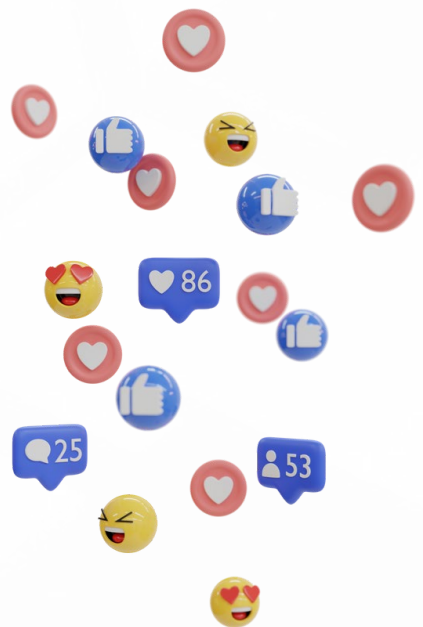
(unaddressed questions, concerns, information voids, misinformation and harmful narratives related to an acute health event)

health misinformation

publication of low quality scientific papers



subpar communication from health authorities





Trustworthy public health and health system

Health systems and pandemic preparedness need to focus on building trust, acceptance and uptake of services, products and health guidance.

“Mistrust is the outgrowth of the perception that promises were broken and values were violated.”

-- Dr. Barbara Reynolds

More: US CDC, Crisis & Emergency Risk Communication (CERC), <https://emergency.cdc.gov/cerc/>

Why is addressing our current information environment so difficult in public health?

Diminished public trust in officials, coupled with increasing diversity of online platforms, creates a context vulnerable to the spread of misinformation.

Debunking misinformation will have limited effectiveness unless the larger social and cultural forces that bolster misinformation are addressed, which requires evidence-based approaches that leverage socio-behavioral and epidemiological insights.

Over the past 15 years, narratives that influence knowledge, attitudes, perceptions, and behaviors related to public health emergencies have circulated faster in our increasingly digitized society. To keep pace, health authorities must be quicker to identify and respond to circulating narratives.



Information environment x health system



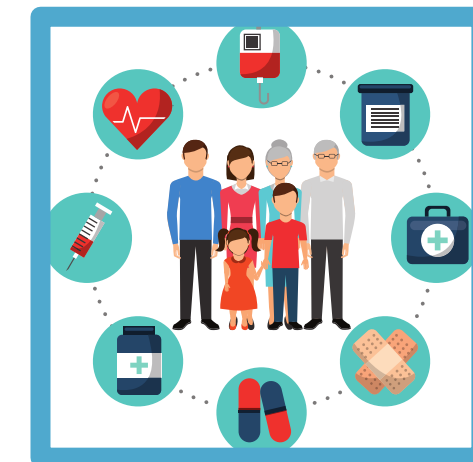
Health system

- Trust in policies and governance related to health care, supply, service delivery
- Asymmetries in demand for care and prevention
- Asymmetries in demand for supplies and health technologies



Health workers

- Trust in health workers; doxxing and harassment
- Health worker own confidence in products and services, in own knowledge about guidance and information



Health behaviors

- Risk perception of disease
- Trust in and acceptability of recommended behaviors and public health and social measures
- Trust in, safety and acceptability of devices, diagnostics, treatments and vaccines
- Social cohesion

Misinformation and a chaotic information environment can erode people's trust in health system's policies, actions and communication.

LOW

access to health services
access to health information

trust in health system, health workers and recommended health behaviors

HIGH

experiencing practical, social and economic barriers to following health guidance

historically low levels of trust across all dimensions

sometimes follows health guidance that is practical and reasonable to follow

changing trust over time

follows health guidance

consistent trust

Example: Building confidence in secondary health data use in the future European Health Data Space

Health care,
treatment,
diagnosis, safety,
efficiency



policy making and
public health,
innovation, and
research

EU health data space impossible without trust, Commissioner says

By Giedre Peseckyte | Euractiv.com ⌚ Est. 6min

📅 Nov 16, 2022 (updated: 📅 Nov 21, 2022)

Example: Building confidence in secondary health data use in the future European Health Data Space

Data altruism

“Without voluntary data sharing by individuals, there will not be enough rich data available for research, innovation and decision-making.”

“Transparency, trust and citizen empowerment are crucial elements for public acceptance.”

“

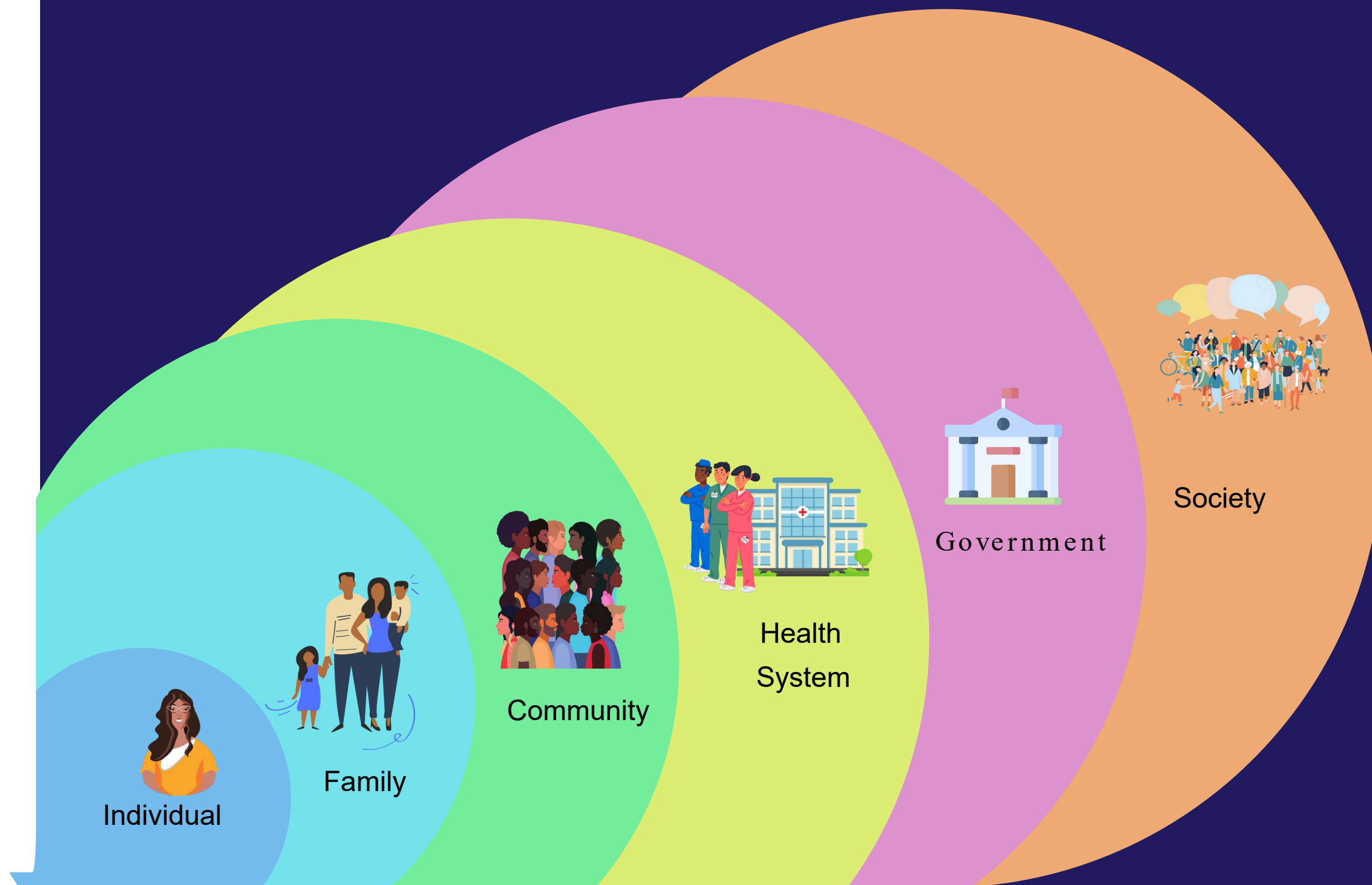


Addressing health misinformation

Strategies to address asymmetries in the information environment and health misinformation are multilevel, and multidisciplinary.

Health misinformation affects all levels of society

Information moves differently between different levels of society and can impact behaviors in different ways



A taxonomy of interventions to address health misinformation

	INTERVENTION CATEGORY	SUBCATEGORY
1	Monitoring and detection of narratives, questions, concerns, and misinformation in the information ecosystem	<ul style="list-style-type: none"> Public health social listening and integrated analysis
2	Science and health communication	<ul style="list-style-type: none"> Rapid content development to address emerging information voids Quality health information materials and resources Science and knowledge translation Debunking and misinformation correction
3	Education & training to build resilience to misinformation	<ul style="list-style-type: none"> Capacity building to identify and address health misinformation Prebunking Improving self-efficacy to adhere to recommended health behaviors Improving ability to develop a more accurate risk perception, and judge benefits of recommended health behaviors
4	Engagement	<ul style="list-style-type: none"> Individual and community-level engagement Psychological support to individuals and communities Health worker level engagement Social media-based strategies Coalition building and digital engagement Digital design for the user experience of information environment
5	Laws, regulations and ethics	<ul style="list-style-type: none"> Cybersecurity laws or cyber-resiliency strategies Public advisory and guidelines with legal mandate/enforcement Legislative ban of misinformation spread or legislation for right to health information Regulation of information and related platforms and ethics Content moderation policies, oversight and implementation

Example : Participatory problem solving and health literacy programme with young people



U of M THE UNIVERSITY OF MEMPHIS
SCHOOL OF PUBLIC HEALTH

RE-AIM Public Health IDEAS
Through the Lens of the Youth Hackathon

 Become a Public Health Champion of Change.

 This will serve as an excellent opportunity to get your ideas recognized, highlight, and find solutions to the growing public health challenges among the youth.

 Get your thinking caps on and be a part of this enriching experience!

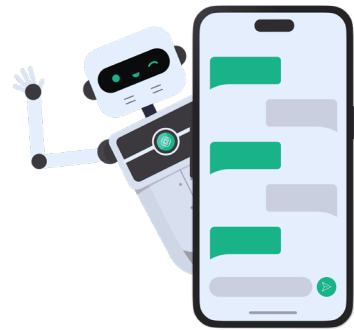
Source: <https://www.memphis.edu/publichealth/initiatives/hackathon.php>

Leveraging

- Digital and analog health information seeking and use
- intergenerational health information seeking and literacies
- peer -to -peer approaches
- linking up public health authorities with young people



How can you help cancel the AI apocalypse?



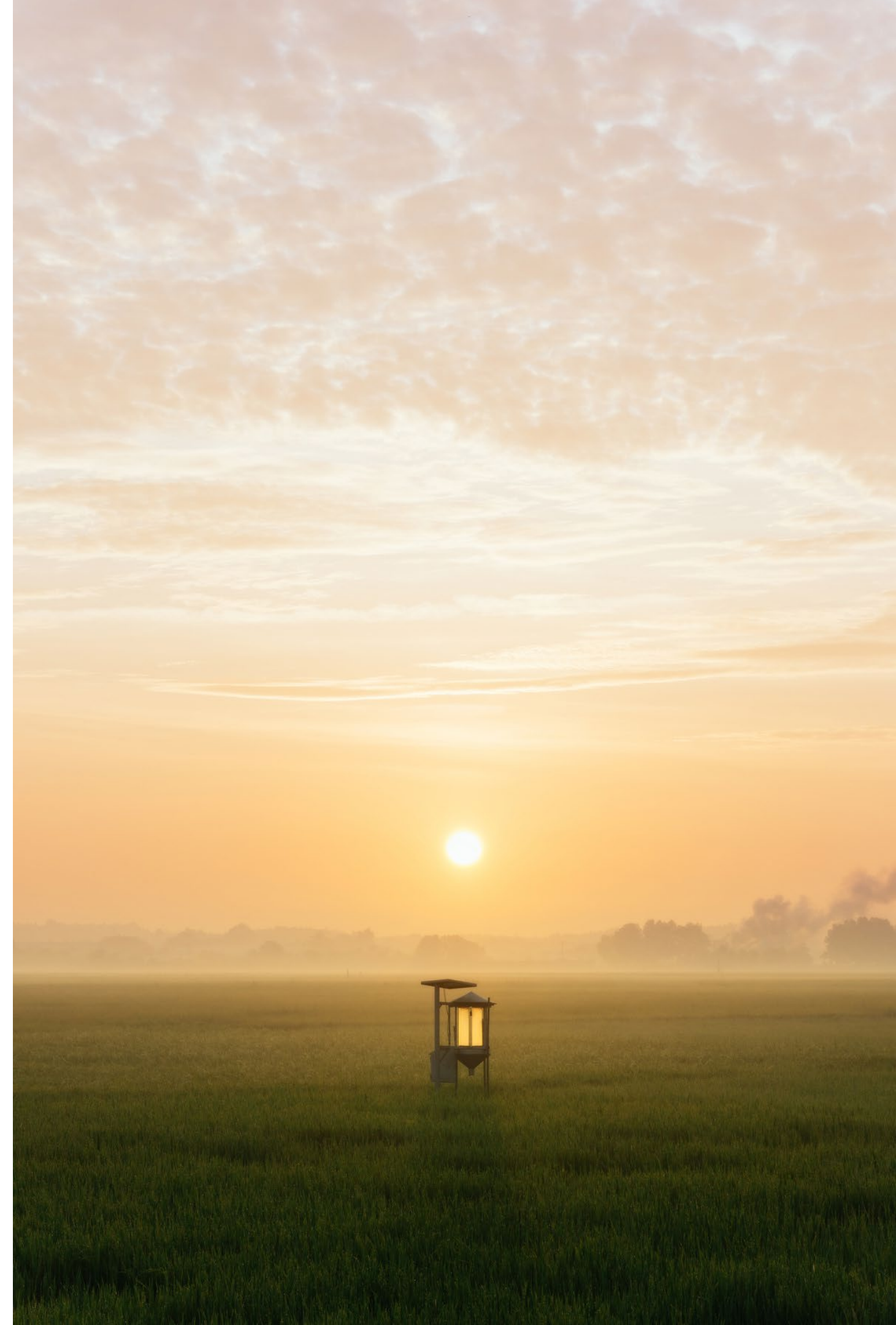
Play with and learn to use ChatGPT and other GPT-powered tools



Introduce discussions and uses of AI and generative AI in the workplace, such as having an informal discussion group or working group



Educate yourself - seek out courses on generative AI and healthcare, substacks, newsletters, podcasts





Thank you
very much!

tinapurnat.com



Resources on information
environment and health
misinformation