The PHERCC matrix. An ethical framework for planning, governing, and evaluating Risk and Crisis Communication in the context of Public Health Emergencies

EACME Warsaw
Facing disruption. Bioethics, human rights and democracy.
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TARGET ARTICLE

The PHERCC Matrix. An Ethical Framework for Planning, Governing, and Evaluating Risk and Crisis Communication in the Context of Public Health Emergencies

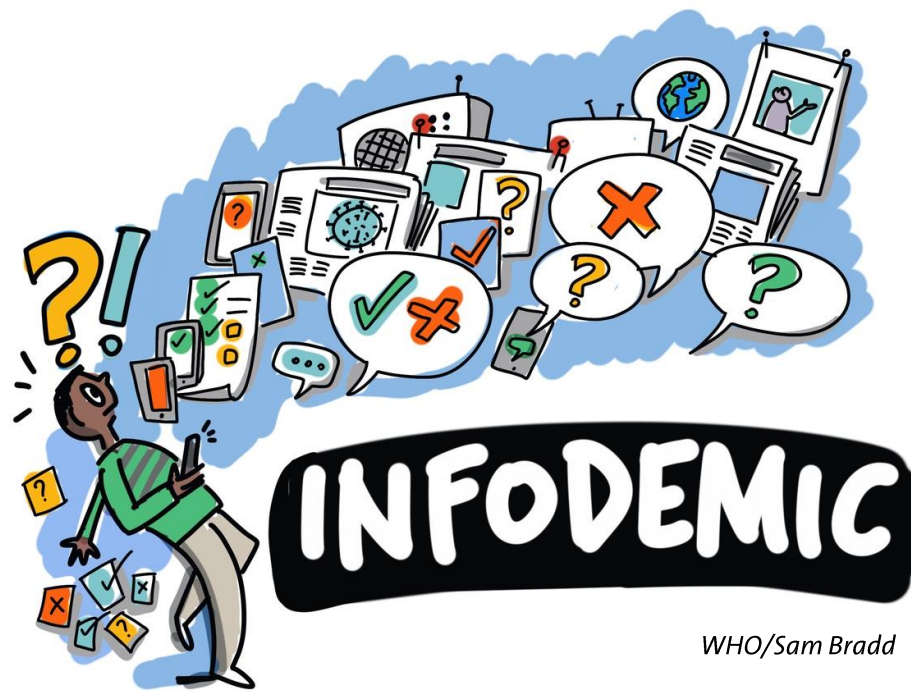Giovanni Spitale* [iD], Federico Germani* [iD], and Nikola Biller-Andorno [iD]

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1. Defining the problem

2. Architecture

3. Strenghts, opportunities, and limitations

1. Defining the problem

WHO/Sam Bradd

Too much information, including false or misleading information, in digital and physical environments during a disease outbreak.

- causes confusion and risk-taking behaviours that can harm health;
- leads to mistrust in health authorities;
- undermines the public health response;
- can intensify or lengthen outbreaks.

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Infodemic management

the <u>systematic</u> use of <u>risk- and evidence-based analysis</u> and approaches to <u>manage the infodemic</u> and <u>reduce its impact</u> on health behaviours during health emergencies.

- Listening to community concerns and questions;
- Promoting understanding of risk and health expert advice;
- Building resilience to misinformation;
- Engaging and empowering communities to take positive action.

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Defining the problem

Effectiveness
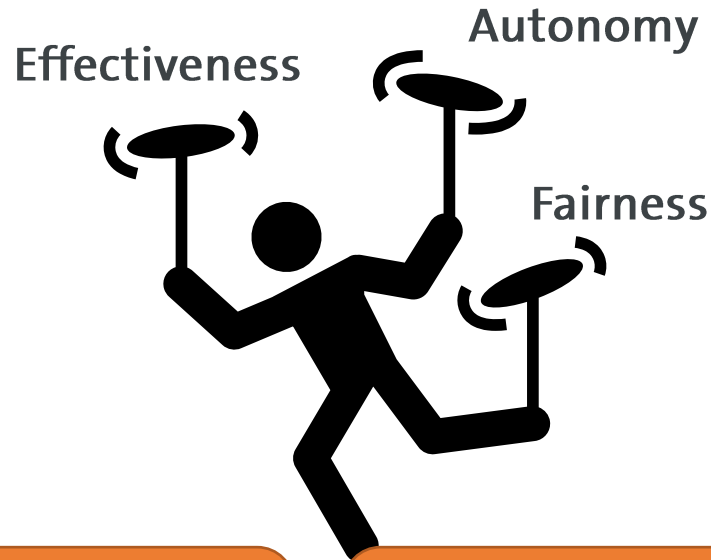
Autonomy

Fairness

Effectiveness: ability to produce benefit in real life conditions

Autonomy (understood differently in different cultures): the combination of intentionality, understanding and non-control

Fairness/justice: a comprehensive set of basic rights and liberties that can coexist with similar rights for all (John Rawls)

Vulnerability of individuals and communities

Active and passive freedom of information

Trust, transparency, and trustworthiness

Privacy, confidentiality, and consent

Spitale G, Germani F, Biller-Andorno N. The PHERCC Matrix. https://doi.org/10.1080/15265161.2023.2201191

The Sendai Framework

Global targets:

Priorities:

- **Understanding** disaster **risk**,
- **Strengthening** disaster risk **governance** to **manage** disaster risk,
- Investing in disaster **reduction** for **resilience**,
- Enhancing disaster **preparedness** for effective **response,** and to "Build Back Better" in recovery, rehabilitation and reconstruction.

Reduce global disaster mortality

Reduce the number of affected people globally

Reduce disaster economic loss

Reduce disaster damage to critical infrastructure and basic services

Increase the number of countries with disaster risk reduction strategies

Enhance international cooperation to developing countries through adequate support

Increase availability and access to multi-hazard early warning systems and disaster risk information and assessments

UN Office for Disaster Risk Reduction. 2015. 'Sendai Framework for Disaster Risk Reduction 2015-2030'. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030.

2. Architecture

Process

Evidence
The scientifical reasons that justify, require, and inform the PHERCC action.

Scientific evidence or opinions from expert groups, on which PHERCC is based. Should include publics' feedback.

Initiator
The entity (local, regional, national or international) who initiates the PHERCC action.

Local, regional, national or international reputable authorities providing information of local and global relevance.

Channel
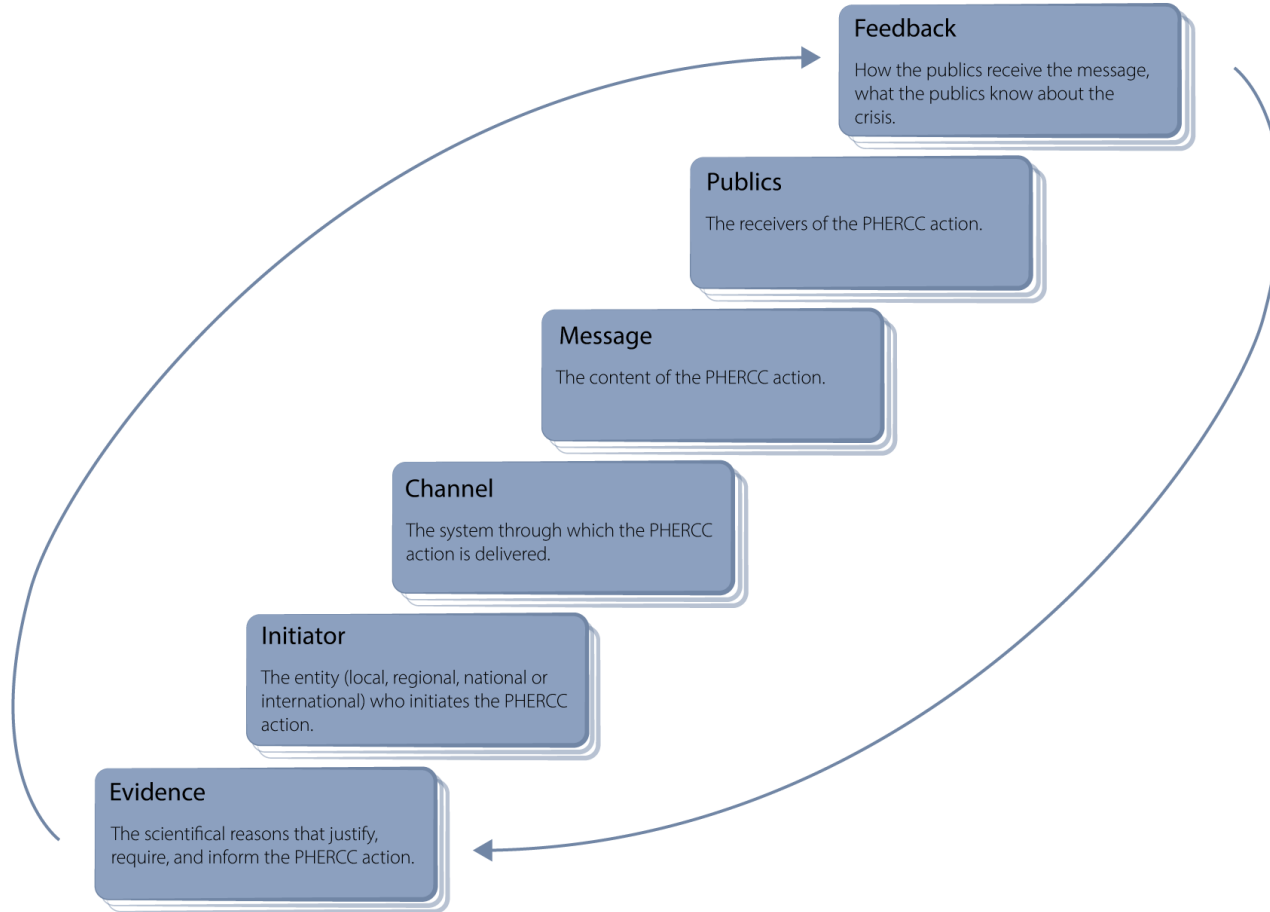The system through which the PHERCC action is delivered.

System or platforms (official websites, press releases, TV, social media) that need to be established and with a broad set of followers to ensure effective outreach.

Message
The content of the PHERCC action.

Based on scientific evidence and publics' feedback, it is the actual content of PHERCC action.

Publics
The receivers of the PHERCC action.

People or groups for whom a specific PHERCC action is intended. It is crucial to define the publics to target the message in the best way, and to collect their feedback.

Feedback
How the publics receive the message, what the publics know about the crisis.

Information on how the message is received and understood by the publics, collected by active or passive social listening.

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The Looped Ladder of PHERCC

Feedback
How the publics receive the message, what the publics know about the crisis.

Publics
The receivers of the PHERCC action.

Message
The content of the PHERCC action.

Channel
The system through which the PHERCC action is delivered.

Initiator
The entity (local, regional, national or international) who initiates the PHERCC action.

Evidence
The scientific reasons that justify, require, and inform the PHERCC action.

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Principles

Openness

Similar to the concept of openness in 'open science', it refers to **sheer availability of information** and the **attitude and ability to create new knowledge with the will to share it** and the ability to receive it.

Transparency

Information transparency implies **visibility of information and its inferability** (e.g: the possibility to draw accurate conclusions from it). It allows participation and informed decision making, fostering fairness and autonomy.

Inclusivity

Information must be inclusive ensuring that **the message is available to everyone** and takes into account **diverse needs of diverse groups** (e.g: minorities, cultural and linguistical differences, polarization, biases).

Understandability

Similar to the concept of inclusivity but regarding the efficacy of the message. The aim is to target the communication in order to **ensure an effective information for different socio-cultural backgrounds** and levels of education using simple concepts.

Privacy

Privacy is involved in the **delivery of the message** to the publics and in the **collection and analysis** of the feedback from each public. Adequate measures should be chosen regarding communication channels.

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The PHERCC matrix

Process					
Evidence The scientifical reasons that justify, require, and inform the PHERCC action.	**Initiator** The entity (local, regional, national or international) who initiates the PHERCC action.	**Channel** The system through which the PHERCC action is delivered.	**Message** The content of the PHERCC action.	**Publics** The receivers of the PHERCC action.	**Feedback** How the publics receive the message, what the publics know about the crisis.

Principles

Principle	Evidence	Initiator	Channel	Message	Publics	Feedback
Openness	Is the evidence of public domain and accessible?	Is the initiator committed to open policies?	Is the channel infrastructure developed with open source software?	Is the message distributed under an open license (e.g: CC-BY-SA)?	Are the publics openly available to receive the message? (e.g. presence online, social media, etc).	Is the content of the publics' feedback openly accessible (after anonymization) to everyone?
Transparency	Has the evidence been generated through a transparent process?	Is it clear who the initiator is, and under which principles or regulations they operate?	Is it clear who operates the channel and how the channel works?	Is the aim of the message transparent? (e.g: eliciting a specific behaviour, enhancing understanding, ...)	Is (aggregated and anonymized) information about the publics visible and inferable?	Is it clear how the feedback was collected and by whom?
Inclusivity	Is the evidence generated taking into account different socio-demographic segments?	Does the initiator include a plurality of voices in the definition of the strategy and of the content?	Does the information delivery strategy take into account the specific needs of different segments of the publics?	Is the message tailored to the needs and specificities of different segments of the publics?	Does the definition of the publics take into account a plurality of (reasonable) doctrines?	Does the feedback represent opinions from different segments of the public?
Understandability	Is the evidence accompanied by interpretative notes and metadata?	Is it clear what are the goals (long- and short-term) of the initiator?	Is it simple to understand how the channel works?	Is everyone from the publics able to understand the message? (i.e. language, complexity, timing, ...).	Is the strategy defining the publics, their composition, and segmentation clearly understandable?	Are the content and the representativity of the feedback clearly understandable?
Privacy	Is the evidence completely anonymized?	Is the individual privacy of the initiator's employees guaranteed (to balance with transparency)?	Does the channel protect users' privacy (e.g: no tracking technologies)?	Does the message contain information that could compromise anyone's privacy?	Is people's privacy guaranteed in the delivery of the message? (e.g. cookies, digital fingerprinting).	Is the feedback completely anonymized?

3. Strenghts, opportunities, and limitations

Strengths and opportunities

Strengths:
- Openness and transparency through the process foster **trust** and allow independent third-party verifications or audits.
- Inclusive approaches and understandability allow people to effectively perceive themselves as **co-actors**, rather than as the recipients (**convincing versus building**).

Opportunities:
- **Paradigm shift** – from policy-makers 'teaching the public' with a (limited and failing) paternalistic approach, towards fully acknowledging different publics as co-actors in the process.
- Understanding concerns from different publics can help structure a communication strategy that suits best the different needs of each public responding to their doubts, **preventing** thus **misinformation** spread.

Limitations

People can be educated to recognize misinformation, but:
* There is **no substantial evidence** on **what skills should be taught** to build information literacy, and
* There is **no understanding of which education plan**, strategy and design **would be effective** in building such skills

Integrating public feedback into an effective action has the risk of **propagating the initiator's bias toward evidence,** and the evidence received through public feedback.

The **"Boaty Mc Boatface" Problem** and the Is-Ought Issue
* NERC polls for a new boat name - when you let people decide, you might be surprised/disappointed
* What if through the feedback loop of a PHERCC action the initiator realizes that **the public is strongly in favor of actions that are morally unjustifiable?**
* What if there is a strong preference for **mitigation measures that do not have any scientific backing?**

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SUMMARIZING:

- Infodemics and infodemic management pose significant **challenges** in **risk and crisis communication.**
- An **ethical framework** is necessary for effective risk preparedness strategies.
- PHERCC actions seem to require a **trade-off** between **fairness, autonomy** and **effectiveness, but communication and understanding cannot be enforced**
- The framework is driven by the **moral value** of **fairness** and encompasses five principles: **openness, transparency, inclusivity, understandability,** and **privacy.**
- The matrix we propose can help **planning, governing,** and **evaluating** PHERCC actions, incorporating these principles across the board.
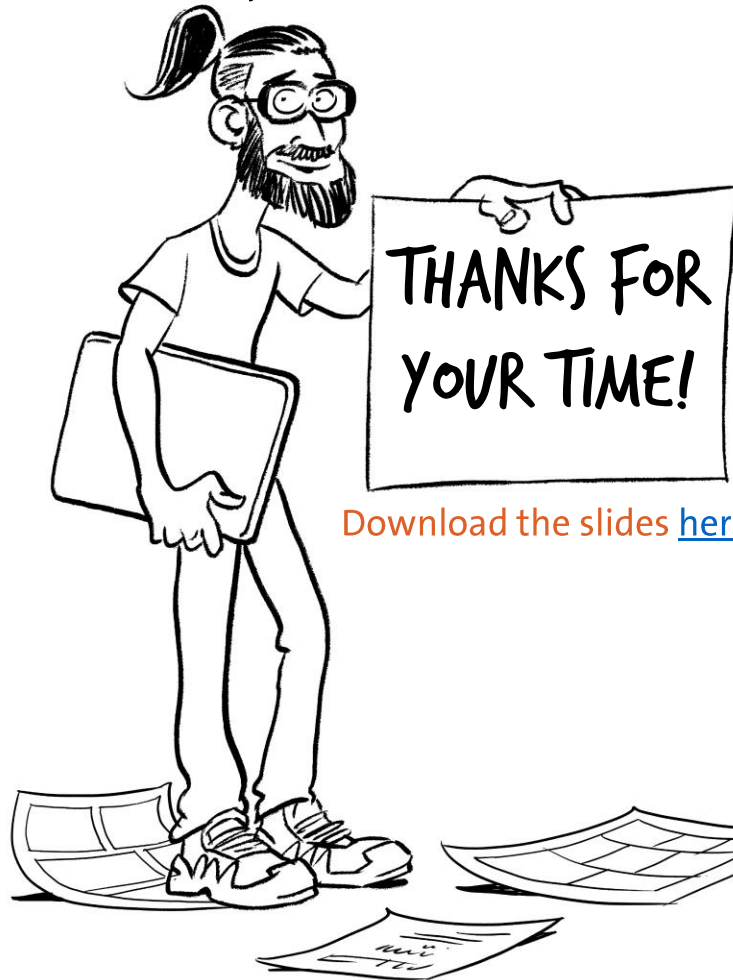- Under our approach, **PHERCC actions are effective if they are fair** -> no tradeoff.
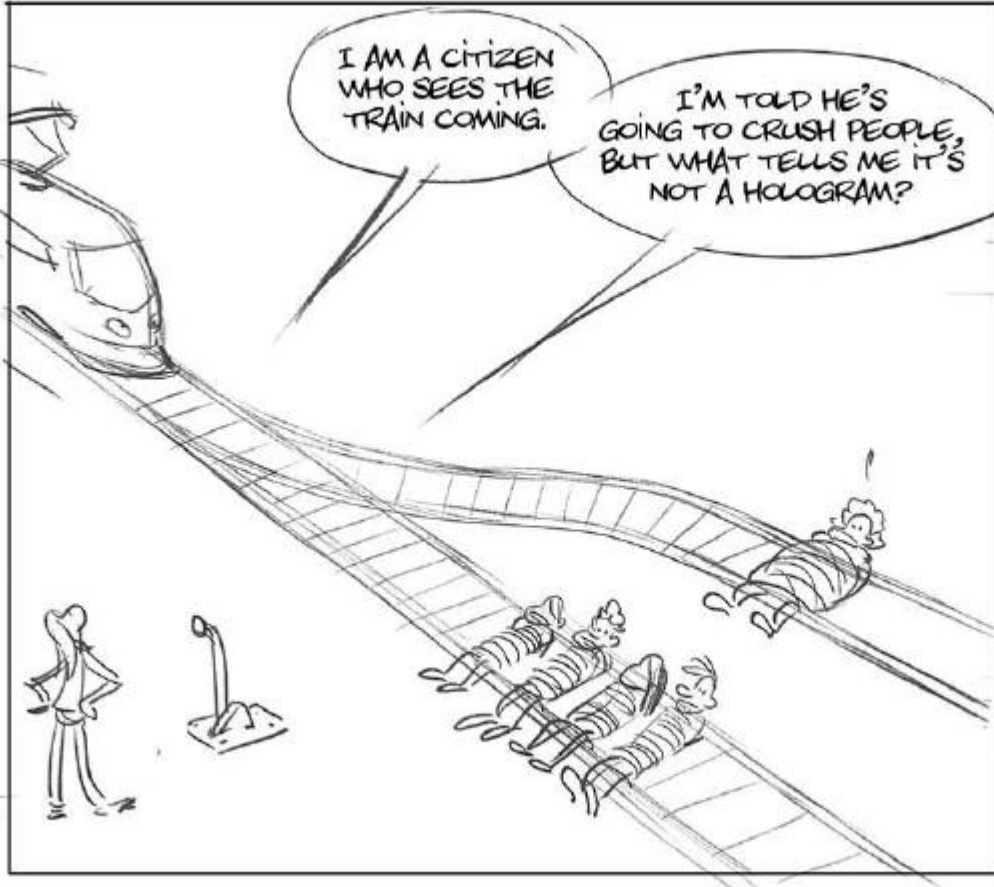
IBME/Eric Buche

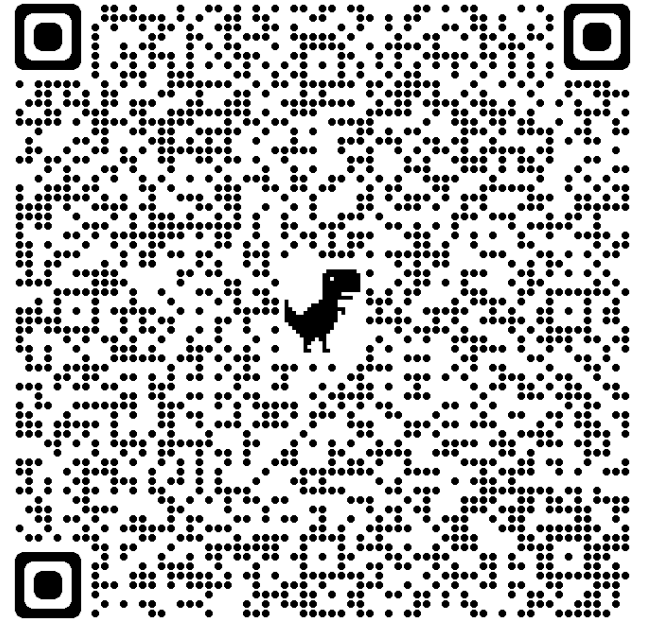University of Zurich UZH

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THANKS FOR YOUR TIME!

Download the slides here ->

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