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It is time for health institutions to invest in persuasive communication to combat low quality information: A lesson learned from the COVID-19 infodemic

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Introduction

“We’re not just fighting an epidemic; we’re fighting an infodemic,” said Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization, at a gathering of foreign policy and security experts in Munich, Germany, in mid-February 2020. The term infodemic refers to an excessive amount of information about a problem that is viewed as being a detriment to its solution (WHO, 2020). Infodemics include information of high-vs.-low quality. Low quality information refers mainly to disinformation, misinformation and fake news. Specifically, disinformation is false or misleading information being created and shared with the intention to cause some harm; misinformation differs from disinformation as it lacks this intention, and it is shared inadvertently. Fake news is false or misleading manufactured information that mimics news on the mass-media. It is a term that, however, is rather vague and nowadays there is refrain from using it (Wang et al., 2019).

In this paper, we show why institutional communication during an infodemic is particularly challenging and call on health institutions to engage in persuasive communication. While some laypeople associate the term persuasion with manipulation, there is a clear difference. Persuasion refers to communication that aims to convince an audience of a certain message’s appropriateness. It is not *per se* negative communication; indeed it is important to present ideas in a convincing way. On the contrary, manipulation occurs when the speaker dishonestly tries to convince an audience (Rubinelli, 2013). We claim that it is time for health institutions to consider communication not as a basic act of information or even education. It is fundamental to engage in communication that involves people’s knowledge, beliefs, and attitudes and can guide their understanding of evidence-based recommendations. Persuasive communication should aim at showing why institutional recommendations are worth being considered, as a way to provide important information that people can consider to engage in properly informed decision-making.

Here we do not claim that people should blindly follow health institutions' recommendation. But they should understand why certain recommendations are as they are and, on the basis of appropriate information from health institutions, best decide what to do. Indeed, it is not a successful decision-making when people harm themselves because they have followed fake or generally suboptimal health information. To prevent this, however, it is fundamental that health institutions do not communicate to people "top-down", but present their views using sound argumentation and showing exactly the ground of their claims.

Institutional communication challenges in a public health emergency

When public health emergencies occur, risk communication from authorities to individuals living in the community is essential to inform people about what is happening, seek to engage them in protective behavior, address concerns, and create an overall feeling of support and collaboration toward limiting the spread of a disease. Poor risk communication can have detrimental consequences at the individual, social, and economic levels (Bennett et al., 2010). However, the success of institutional risk communication in infodemic contexts is severely challenged by several aspects.

First, risk communication during a new epidemic takes place under uncertainty, with major implications for how it can be received by people. When a new disease is spreading, epidemiologic data collection is ongoing. In the initial phases of an epidemic's spread, and for months afterwards, comprehensive scientific evidence is lacking (Jansen et al., 2018). People must be informed that a new virus may cause serious health threats, but at the same time the scientific appraisal of the problem varies from day to day. Health institutions engage in public risk communication, but the communication content can change daily based on newly acquired knowledge. This uncertainty can lower people's trust in institutions and science (Longman et al., 2012).

Second, laypeople may struggle to appraise scientific evidence and epidemiological data. Information about the nature of a virus, including its origin, development, and spread, is often technical, and it is likely to be outside the average health literacy of laypeople. Lay epidemiology refers to the processes by which laypeople understand and interpret health risks. In these processes, they may develop personal views that undermine institutional messages and may even obstruct the transmission and uptake of institutional communication (Allmark and Tod, 2006).

Third, institutional risk communication is challenged by dis/misinformation that, as mentioned above, is false or inaccurate, or that expresses the opinion of a single person and

cannot be generalized, or that results from conspiracy theories (Wang et al., 2019). These types of low-quality information often involve questioning, doubting, and contradicting institutional communication and can lead to a lack of trust in institutions and stigma of population groups that have become scapegoats. Mis/disinformation was and still is a major communication problem in the context of COVID-19. It will also remain a problem for future public health issues. People are constantly exposed to information that comes from non-experts giving their points of view on scientific and technical topics. This is particularly evident on social media: among the so-called influencers speaking about COVID-19, only a few are qualified to explain and support institutional communication (Cuan-Baltazar et al., 2020). And information on social media can easily become viral. For example, there is evidence of a relationship between anti-vaccination efforts on social media and public doubts of vaccine safety, as well as between related disinformation campaigns and declining vaccination coverage (Wilson and Wiysonge, 2020; Gisondi et al., 2022).

In this context, it is concerning that much mis/disinformation can be persuasive, providing explanations when institutions are not yet in the position of giving them (e.g., about the origin of COVID-19). These explanations are easy to understand, as they have engaging narratives. Lots of low-quality information, especially resulting from conspiracy theories, do not require scientific knowledge to be understood, although they might falsely report scientific evidence and proof in support. They build on people's insecurity about institutions, maximizing the perceptions and ideologies of those who, in general, do not trust science and institutions (Scardigno and Mininni, 2020).

As the behavioral sciences show, information influences knowledge, beliefs, and perceptions that together are the main determinants of behavior (Rubinelli et al., 2020). As the Health Belief Model posits, people's engagement in health promotion and disease prevention behavior derives mainly from their beliefs about the severity and perceived risks of a health problem, their beliefs about the perceived benefits of and the barriers toward acting in a certain way, and their level of self-efficacy (Rosenstock, 1974). The prevention and management of the COVID-19 pandemic, as a case-study, has a main behavioral component. People have to engage in relatively easy behaviors, such as handwashing and avoiding shaking hands, and in more restrictive behavior, such as protecting the elderly by keeping a safe distance, and finally by observing drastic measures like staying at home and avoiding social gatherings. If people form incorrect beliefs and perceptions from low-quality information, they may fail to engage in appropriate behavioral responses, minimize the risks, and not consider behavior change as important. Conversely, they may develop excessive risk perception and suffer from psychological stress and other mental disorders as a consequence. All this happens in a context of risk appraisal that, as Kahneman and Tversky

have raised, can also be influenced by heuristics. People often use shortcuts that simplify thinking and reduce the cognitive burden of deep reflection. In this sense, heuristics may simplify thinking and lead to finding easy solutions to deal with information that is technical or difficult to understand (Tversky and Kahneman, 1974).

Discussion: Call for persuasive communication

For the above-mentioned reasons, risk communication during a public health emergency is challenging. Existing work gives basic guidelines, but they do not specifically address how to act in contexts characterized by mis/disinformation and considering the entire set of factors highlighted above (World Health Organization, 2017). Moreover, institutions face two additional barriers. First, although health systems are more aware of the importance of communication (see, for instance, the introduction of communication skills courses in medical and health professional curricula), the resources allocated to communication are often insufficient. Following the Eisenhower Decision Matrix, communication is often still seen as important but not urgent. Second, the modalities and strategies of persuasive communication by (social media) influencers are often not applied in official communication (Olaru, 2014). Nowadays, the lay audience is accustomed to quick and rapid communication, often in the form of claims from messengers favored for their physical and emotional appearance, sociability, and assertiveness. Mis/disinformation is frequently packaged in formats that are very easily received, understood, and evaluated by lay audiences. From this type of communication health institutions can learn how to best speak to their public, which does not mean to follow strategically manipulative instances, but to talk at a level that really “speak” to people.

To think about communication as persuasion means reflecting on the characteristics of communication that will likely make it successful to target an audience. Investing in persuasive communication requires a focus on the following aspects, all highlighted in the traditional Jacobson model of communication (Lidov, 2007):

- 1) The sender: how to build trust in people and be perceived as relevant and important. This often means publicly addressing mis/disinformation that accuse institutions of making mistakes or acting in the wrong way.
- 2) The message: how to best frame messages in order to answer people’s uncertainties, fears, and lack of understanding, considering that most people are not experts in science, scientific language, or scientific reasoning.
- 3) The receiver: how to influence people’s knowledge, beliefs, attitudes, and behavior, while avoiding the growth of perceptions that minimize or maximize risk perception. This

also requires systems to be able to interact with people and to collect and address their concerns and questions.

- 4) The channels: how to best use communication channels according to users’ characteristics and preferred methods of communication.
- 5) The context: how to provide counterarguments to fake news and false generalizations of the opinions of single experts or influencers that go against scientific evidence and recommendations or present information that is inconsistent with what health institutions communicate.

Knowledge on how to make risk communication persuasive can be found in theories and tools presented in the literature on health campaigns and social marketing, argumentation theory, persuasion research, and advertising theory (O’Keefe, 1982; Rodgers and Thorson, 2012; Rubinelli and Henkemans, 2014; Lee and Kotler, 2019). For this to take effect, however, significant resources have to be allocated. Here it is fundamental to reflect on the linguistic aspects of the institutional discourse, relying on years of strong theories and models of argumentation and persuasion available since the time of classical rhetoric. Investment in persuasive health communication is needed to strengthen health institutions’ role as public health advisers and guides for the community, as they are entitled to be and should be.

Author contributions

SR, ME, CZ, and ND conceptualized the paper and structured the content. SR drafted the manuscript. ME, CZ, and ND provided feedback and suggestions for revision until consensus on the final version was reached. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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