

Communicating risk in public health emergencies (CreSP) – “Comunicare il rischio nelle emergenze per la Sanità Pubblica (CreSP)”

Introduction

By definition, health communication aims to promote positive change in the health status of individuals and communities. Although health communication can contribute to all aspects of disease prevention and health promotion, it is particularly relevant in a number of contexts, including risk communication. The conceptual foundations of risk communication draw on complex social, cognitive, and psychological research in a wide variety of areas, including behavioral communications, environmental health, health promotion, governance, and social marketing¹. Risk communication is defined as “the process of exchanging information among stakeholders about the nature, extent, significance, or control of a risk”². Disasters, regardless of their nature (e.g., natural, biological, chemical, radiological), require timely, accurate, and credible messages to the public. Conceptually, risk communication is often associated with an expected event that examines the outcomes of behaviors or exposures³.

Following the SARS-CoV-2 pandemic and the recent publication of the National Strategic-Operational Plan for Influenza Pandemic Preparedness and Response (PanFlu 2021-2023), risk communication is recognized as one of the fundamental capabilities in optimal health emergency management. Accurate and timely information enables people to make choices and adopt behaviors to protect themselves, their families, and their communities from health hazards.

However, the speed with which public health decisions are made is not always sufficient to address the concern and indecision among the population caused by the spread of the emergency, creating a space in which plausible false information can discredit the effectiveness of interventions. The World Health Organization coined the term “infodemic” in the context of the pandemic precisely to emphasize the importance of the phenomenon and to highlight its possible repercussions in the healthcare context⁴. Significant and tangible, the

¹ Infanti JJ, Sixsmith J, Barry MM, Núñez-Córdoba JMCO-O, Guillén-Grima F. A literature review on effective risk communication for the prevention and control of communicable diseases in Europe. *Eur Cent Dis Prev Control*. 2013;(10.2900/64747):1-16

² Covello, V.T. (1992). Risk communication: An emerging area of health communication research. In S.A. Deetz (ed.). *Communication yearbook 15* (pp. 359-373). Newbury Park: Sage.

³ B. Reynolds, M.W. Seeger *Crisis and emergency risk communication* (2014 Edition), Centers for Disease Control and Prevention (2014) <https://stacks.cdc.gov/view/cdc/25531>

⁴ Munich Security Conference. <https://www.who.int/director-general/speeches/detail/munich-security-conference>. Accessed August 7, 2022

infodemic has affected the population at all levels, including healthcare professionals^{5,6,7}. The main channels through which unverified information has spread during the pandemic have been social media, already recognized as a vehicle for anti-scientific information. Timely, concise, and accurate messages to the public are fundamental components of risk communication in the event of events relevant to public health. Crisis and emergency risk communication is the process of understanding public perceptions and, in response, developing messages to address public concerns and provide information on how to respond to an event to minimize morbidity and mortality. The expansion of social media has provided great opportunities to reach large numbers of people, even in hard-to-reach areas. However, challenges and barriers to risk communication methods can cause confusion and mistrust among the public. Therefore, it is essential to pay close attention to the development and dissemination of messages during disasters.

In this regard, it is essential to verify how national and regional legislation is oriented towards the issue of crisis and emergency risk communication, in light of the latest scientific evidence.

Study objectives

General objective: To describe existing practices at national and regional level relating to risk communication in emergencies. The study aims to map existing practices, making comparisons at territorial level. The scoping review will focus on collecting and comparing regulatory documents, policy documents, and guidelines produced at national level in the specific area of interest.

Specific objective 1 Identify the main methodologies known in scientific for risk communication in healthcare in emergency contexts.

Specific objective 2 Map existing regulatory references at the national and regional levels and their practical applications.

Specific objective 3 Verify the adherence of the regulatory references and practical applications identified with the methodologies that emerged from the literature analysis.

Methodology

⁵ The Lancet Infectious Diseases. The COVID-19 infodemic. Lancet Infect Dis. 2020;20(8):875. doi:10.1016/S1473-3099(20)30565-X

⁶ Glasziou PP, Sanders S, Hoffmann T. Waste in covid-19 research. BMJ. 2020;369. doi:10.1136/BMJ.M1847

⁷ Casigliani V, de Nard F, de Vita E, et al. Too much information, too little evidence: is waste in research fuelling the covid-19 infodemic? BMJ. 2020;370:1847. doi:10.1136/BMJ.M2672

The research questions formulated are as follows:

- 1) What are the regulatory and scientific reference sources for health risk communication in emergencies?
- 2) What are the reference documents at national and regional levels in health risk communication in emergencies?
- 3) How do national and regional reference documents compare with scientific literature?

Table 1. Scoping review PICO framework question

PICOs Framework	
P - population	Scientific literature dealing with risk communication in healthcare in emergency situations
I - intervention	Tools for communicating health risks in emergency situations
C - comparator	No comparator
O - outcome	Description of risk communication tools in healthcare in emergency situations Assessment of regional risk communication plans to identify plan coverage according to standards
S - setting	Not specific setting
S - study	Prospective, retrospective observational studies; Experimental studies including RCTs; review
T - Type of publication	Research articles, expert opinions, letters to the editor, viewpoints, Scoping review, Systematic review, Meta-analysis

Definitions:

Health risk communication: all communication measures concerning risks to human health (direct and indirect risks from a One Health perspective) in emergency situations.

Communication measures are understood to include both those intended for the general public or a target population for informational purposes, and those intended for specific contexts or particular stakeholders for organizational/procedural purposes.

Emergency situation: Unforeseen or extraordinary situations or conditions that require immediate action to avoid/limit serious consequences for the public health of one or more communities.

Inclusion criteria

The study includes scientific literature on the topic of risk communication in emergency contexts published in the last 5 years, as well as national and local pandemic plans issued in the last 20 years. Pandemic plans from countries other than Italy are excluded. The documents included are in Italian or English. Pre-prints are excluded.

Phenomenon of interest

The study aims to understand the adherence of regulations to the latest scientific evidence.

Identification of sources

With regard to scientific literature, the extraction will be carried out by Web of Knowledge (which includes the scientific databases Web of Science and MEDLINE) and Scopus (which includes specialized scientific databases such as Elsevier, Wiley-Blackwell, and IEEE).

Development of keywords and search criteria

The initial keywords that will be used are:

- preparedness;
- pandemic;
- emergenc*;
- threat;
- plan;
- community engagement;
- risk communication;
- Disaster plan;
- disaster management;
- Crisis Management Team;
- Early Warning and Response;
- International Health Regulations;
- Risk Assessment.

Document selection

The search results will be imported into the Rayyan reference management database (<https://www.rayyan.ai/>) and duplicates will be removed. Throughout the process, the total number of studies included in each stage of the desk review will be recorded. The results will be summarized in a flow chart in the final report.

The selection process will be performed in three steps:

- Following an initial calibration phase on 500 records to ensure alignment among reviewers, the full dataset will be divided among six reviewers for single-reviewer title and abstract

screening. Each record will be classified as included, excluded, or unclear.

- Potentially eligible articles will undergo full-text screening. Each document will be independently assessed by one reviewer. Any uncertainties will be resolved through team discussion.
- Additional exclusions will be made during the data extraction phase of selected articles (e.g., duplicate studies, insufficient outcome data, inappropriate publication type, or language not meeting inclusion criteria).

To identify the regulatory framework and pandemic plans, consultations will also be carried out with the network of experts—national focal points for preparation and their equivalents will be consulted via email/telephone—and reference searches—the bibliographies of articles that meet the eligibility criteria will be searched manually to identify any additional relevant references, which will undergo the same screening and selection process.

The sensitivity of the strategy will be tested by presenting it to the project team to verify the existence of other relevant articles that meet the inclusion and exclusion criteria but were not found using the search approach described above.

Synthesis of information

The information collected will be organized into tables with the following structure:

- 1) Summary of evidence from the scientific literature.
- 2) Structure and analysis of national and regional documents in light of the main evidence in point 1.
- 3) Benchmarking and qualitative-quantitative summary of regional documents.

Report preparation

The final report will contain a summary of the context and the evidence that has emerged. In this case, it will contain a narrative review of the scientific literature on risk communication in emergencies. In a subsequent phase, national and regional regulatory references will be compared in light of the evidence that has emerged. Finally, several recommendations for drafting and updating regulations will be described.