

Health Communication in Portugal: Current Challenges and Prospects

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ABSTRACT: **Background:** Health communication is a fundamental component of public health promotion and is crucial for disseminating information, raising public awareness of healthy behaviours and managing health crises. In Portugal, health communication has evolved over the last few decades, adapting to new technologies and the growing need for accurate and accessible information. However, there are still significant challenges that impact its effectiveness, such as inequitable access, pervasive misinformation and over-reliance on digital platforms. **Aim:** This narrative review critically examines the current challenges shaping health communication in Portugal, identifies progression and limitations within existing practice, and proposes evidence-informed priorities for Health Communication in Portugal through current Challenges and Prospects' improvement, grounded in recent data and emerging trends. **Methods:** A qualitative narrative analysis of peer-reviewed literature and policy documents, published between 2010 and 2025, was embraced. **Results:** Persistent barriers include social and digital inequities, misinformation and variable institutional capacity. However, health-literacy initiatives and data-driven campaigns show measurable progress. **Conclusions:** Tackling these barriers will require coordinated, inclusive and technologically enabled strategies that strengthen trust, promote equity and optimize health outcomes in Portugal.

KEY WORDS: Health communication; health literacy; health promotion; disease prevention; population

INTRODUCTION

Historically speaking, health communication relied on transmissive, vertical models, centred on the dissemination of messages by the state, aimed at changing individual behaviour.^[1-4] Over time, these models have been replaced by more participatory, dialogic, citi-

zen-centred approaches that recognize the active role of individuals in managing their health.^[1,3,4]

Until the end of the 20th century, health communication in Portugal was dominated by awareness-raising campaigns promoted by health authorities, with

an emphasis on normative messages, often centred on individual responsibility.^[4] Vaccination, smoking cessation, hygiene and family planning campaigns were mainly publicized through traditional media – television, radio and the press – structures which were poorly adapted to different audiences.^[1-4] This top-down approach proved limited, particularly in contexts of low health literacy and socio-economic inequalities, hindering information assimilation.

Health communication is an essential tool for promoting public health, preventing disease and improving the population's health literacy.^[1] In Portugal, the field has evolved alongside technological, social and political change. From mass-media campaigns to today's digital and AI-enabled tools, health communication has become a strategic and transversal area, especially in crisis contexts, as demonstrated by the COVID-19 pandemic.^[1-4]

Nevertheless, limited information access, low literacy levels and regional inequalities continued to constrain effective communication. Portugal is now experiencing a transformation in health communication: the culture within the field has become more strategic, multidirectional, segmented and adapted.^[5,6] Social networks, digital platforms, influencers and mobile technology have reshaped these dynamics.^[5,6] The Directorate-General for Health [DGS] and the National Health Service [SNS] increasingly leverage digital channels, data and algorithms to personalize campaigns, issue health alerts and monitor impact, positioning health literacy as a strategic priority.^[7,8]

Caregivers, volunteers, health influencers, local communities and associations will play a crucial role in fostering culturally and linguistically sensitive, proximity-based communication that promotes citizen autonomy.^[7,9,10] The COVID-19 pandemic underscored the need for clear, empathetic, evidence-based messaging, tailored to diverse audiences while exposing the corrosive impact of misinformation on trust and compliance.^[11,12]

Emerging technologies – including AI, big data, chatbots, augmented reality and interactive platforms – will be strategies that will continuously shape Portuguese health communication; however, empathy, active listening and accessibility must remain key procedures too.^[13] Public policies that promote inclusion, clarity and transparency in citizen communication will be therefore essential.^[13] In sum, health communication serves as a strategic pillar of public health policy, influ-

encing behaviour, advancing literacy and strengthening institutional trust.^[14]

Interest in the field has surged in recent decades as new communication formats emerge and citizen participation gains prominence.^[13,15,16] Health communication can be understood as a process of sharing information with the aim of improving health and general well-being. It involves multiple actors – health professionals, managers, the media, public institutions and civil society – institutions and individuals that employ diverse strategies to achieve this goal.^[1,4,6,12] Health communication plays a fundamental role in health promotion, disease prevention and improving health literacy.^[2,7,10,17] Health literacy is defined as the ability to access, understand, evaluate and use information to make health decisions: A key concept in health communication.^[2,17]

As an inherently interdisciplinary field, health communication synthesizes insights from communication science, public health, medicine, psychology, sociology, economics, political science, data science and emergent domains such as health informatics and entomology.^[15,18,19]

Accordingly, this narrative review analyses the historical evolution of health communication in Portugal, identifies persistent barriers and recent advances, and outlines future priorities – particularly the integration of artificial intelligence and user-centred strategies – to enhance equity and effectiveness.

METHODS

This article adopts a qualitative and exploratory narrative review approach, based on a bibliographic and documentary review of national and international sources, including scientific literature, reports from the Directorate-General for Health [DGS], and documents from the World Health Organization [WHO].

The research searched scientific sources indexed in PubMed, B-on, Web of Science and Scopus, covering the last 15 years (2010-2025) with the aim of critically analysing the historical evolution, contemporary challenges and future prospects of health communication in Portugal. The core Boolean string – “health communication” AND “Portugal” AND (“literacy” OR “promotion” OR “digital”) – was adapted to each database.

A narrative review was chosen because it allows for an interpretative, comprehensive and flexible approach, which is particularly suitable for complex, inter-

disciplinary and rapidly evolving areas of knowledge, such as health communication.

Data collection took place in the first few months of 2025 and included two main strands:

- a) Systematised bibliographic search in international scientific databases;
- b) Documentary analysis of institutional sources and national and international public policies.

Duplicate papers, purely clinical studies unrelated to communication and publications without peer review were excluded. Additional exclusion criteria included: (i) grey literature lacking verifiable authorship, and (ii) articles not available in Portuguese or English.

After identifying and selecting the sources, the documents were subjected to initial skim. The National Health Literacy Plan and subsequent analytical reading, using an inductive thematic analysis. Screening counts for each review stage (identification, de-duplication, title/abstract screening and full-text eligibility) were recorded, and the Mixed-Methods Appraisal Tool was applied to assess methodological quality^[20]. This process enabled the identification of emerging categories related to the object of study. Triangulation between scientific sources and institutional documents ensured credibility and interpretative consistency, allowing for a comprehensive and contextualized understanding of the phenomenon. As this is a narrative review with no involvement of human beings or primary data collection, no ethics committee approval was required. However, all the sources used were duly cited and respected the principles of academic integrity.

RESULTS

Improving health communication strategies has become a prioritized goal, especially in light of recent health crises, such as the COVID-19 pandemic, and in a scenario marked by increasing levels of misinformation surrounding health issues. This goal is directly linked to the sustained promotion of health literacy, a key factor in empowering citizens to make informed decisions and adopt healthier behaviours.^[21–23] The development of effective strategies to improve health literacy at all levels of society is therefore crucial to achieving public health promotion goals. The creation and implementation of digital strategies reinforces the need for targeted interventions tailored to different segments of the population.^[23–25]

Historical patterns (1900s – 1990s): For much of

the 20th century, health communication in Portugal followed an informative, unidirectional model, based on technical authority and mass media. Vaccination, public hygiene and smoking-prevention campaigns mainly used television, radio and posters.^[5] Because health literacy was low and access to information unequal, these campaigns achieved only modest reach and impact.

Shift to participatory, data-driven strategies (2000s – present): In recent decades, there has been a shift towards more interactive, segmented and data-driven strategies.^[7,9] Key milestones include the National Health Literacy Plan and the DGS Health Communication Strategy, institutions that introduced a new logic, based on empowering citizens and using communication as a tool for behaviour change.^[7,9] Portugal has thus made significant progress in modernizing health communication, promoting a transition from vertical models to citizen-centred approaches rooted in health literacy.^[13] The application of the potential of transmedia narratives as innovative and effective tools for strengthening health literacy, not only in Portugal but also in international contexts, has contributed to a more informed, participatory and autonomous citizenry in health matters, as well as enabling more efficient management of health system resources at the national level.^[21–23]

Persistent barriers and emerging opportunities: Despite progress, the future will require a balanced approach between technological innovation and human values, with investment in training professionals, to lead the cause in fighting disinformation and strengthening citizen participation.^[13] Health communication is not just a technical tool, but a social, relational and strategic practice that requires dialogue, trust and a commitment to equity. However, social networks and digital platforms, while increasingly prominent, continue to mirror inequalities in access and carry risks associated with misinformation. At the same time, artificial intelligence and personalization offer growing potential to tailor messages and monitor their impact.^[8,18,26]

The application of the potential of transmedia narratives as innovative and effective tools for strengthening health literacy, not only in Portugal but also in international contexts, contributes to a more informed, participatory and autonomous citizenry in health matters, as well as enabling more efficient management of health system resources at the national level.^[27] Health literacy has taken on a central role in the

analysis of health systems, especially in understanding how individuals interact with the various components of these systems. Health literacy levels directly influence the ability to make appropriate health decisions, with a direct impact on individual and familiar quality of life. This reality is particularly relevant in a demographic context such as Portugal's, a country marked by an ageing population and an increased number of dependent people, whether that is through younger or elderly demographics.

Low levels of health literacy are often associated with a reduced ability to manage chronic diseases, difficulties in resolving situations that could be treated at home, a higher rate of avoidable hospitalisations, excessive use of emergency services and lower adherence to preventive practices. Health literacy should therefore be seen as a strategic priority, with direct effects on the sustainability and efficiency of health systems. [8,21–25,27]

DISCUSSION

The results show that health communication in Portugal still faces several major obstacles, yet the findings also reveal clear opportunities for enhancement. The integration of new technologies into health communication presents both challenges and advantages. On one hand, digitalization facilitates access to information and allows public health campaigns to reach a wider audience. On the other hand, it can entrench disinformation and digital exclusion if it is not well regulated. Personalized communication, through digital platforms and telemedicine, has the potential to further empower the population, especially in the management of chronic diseases. However, the adaptation of health professionals to these new forms of communication is still an ongoing process, and the lack of adequate training can jeopardize relationships with the population. During the COVID-19 pandemic, the importance of clear, empathetic and transparent risk communication was emphasized, reinforcing the role of social media and official digital channels, but it simultaneously exposed the speed and scale of infodemics. Persistent challenges therefore include curbing misinformation, tailoring language to diverse literacy levels and embedding systematic communication training into health curricula. Looking ahead, big data, artificial intelligence and chatbots, can optimize the delivery of messages based on user behaviours and profiles, provided their algorithms remain transparent and equity-oriented.

However, these innovations require ethical and privacy assurances, digital inclusion to avoid inequalities and integration with humanized communication practices centred on empathy and active listening. Continuous training in communication and digital skills for health professionals and the promotion of critical citizenship will be fundamental to guaranteeing effective and inclusive communication. Portugal's trajectory – from top-down broadcasts to interactive, citizen-centred dialogue – demonstrates tangible progress but also reveals remaining gaps. It is now recognized as a fundamental tool for health promotion and disease prevention, with the potential to transform the way society relates to health. Going forward, technology and humanism must be integrated so that communication remains efficient, inclusive and ethically grounded. Health communication can help reduce health inequalities however it may also widen them if the sources of disparity – access, exposure and behaviour change barriers – are not addressed. Investing in participatory strategies, strengthening health literacy and empowering professionals and citizens to communicate more consciously and critically are essential steps towards a more resilient, fair and people-centred health system.

Improving public health communication during a global crisis is essential to strengthening community resilience. The COVID-19 pandemic has clearly highlighted the central role of public health in defining effective strategies and making intelligent use of digital tools to combat the infodemic and disseminate reliable information. To tackle future epidemics, it is essential that health professionals develop and improve their communication skills, in order to strengthen public confidence and promote protective behaviors. [27]

At the same time, social media and other digital platforms play a strategic role in managing communication in emergency situations. They should therefore be studied, understood and used critically and effectively as channels for outreach, mobilisation and health literacy. Digital social networks, such as Facebook, are becoming increasingly relevant platforms for health communication, offering wider information dynamics than traditional media. These tools bring patients and health professionals closer together, reinforce therapeutic adherence, promote health literacy and offer emotional and social support to individuals. [27]

There is still a lack of studies that systematically analyse the role of negativity and positivity in communication about diseases, especially in digital contexts.

The construction of health messages can be analysed at two fundamental levels: micro and macro. On one hand, the micro level, given that this is where emotional appeals and the theoretical structure of the message, strongly associated with positive or negative valence, fit in. On the other hand, the macro level includes strategies based on behavioural theories, responsible for designing messages aimed at promoting behavioural change in health.^[25]

CONCLUSION

Health communication in Portugal must balance technological innovation with ethical and humanistic principles. Investments in health literacy, training professionals and combating disinformation are fundamental to strengthen trust and improvement in health outcomes. Emerging tools – artificial intelligence [AI], chatbots, interactive platforms and predictive analytics – can design highly personalised strategies that reach specific groups according to risk profiles, habits and needs, provided that privacy tools and transparency are guaranteed. However, technology alone is insufficient; communication must continue to value the human element, fostering relationships of trust, active listening and empathy. Training in communication skills and investing in health education in schools and communities will be key to a more equitable and informed future. Health communication in Portugal faces considerable challenges, including misinformation, unequal access to information and message fragmentation, but also offers opportunities for transformation through cross-sector collaboration and citizen participation. A multi-sectoral strategy that prioritizes transparency, accessibility and personalisation can narrow information gaps and strengthen the health system as a whole. If well implemented, such changes could significantly impact and consequently, improve public health, reduce inequalities and add reinforcement in systemic resilience.

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