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# Communicating Innovation in Healthcare

## An Analysis of Expert Insights, Patient Perspectives, and Digital Narratives

### Abstract

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## Table of Contents

Abstract .....	3
Chapter 1: Introduction .....	4
Chapter 2: Theoretical Framework .....	5
Chapter 3: Empirical Research and Findings .....	6
Chapter 4: Towards a Prototype for Innovation Communication .....	7

## Abstract

The recent and rapid digitalisation of healthcare has introduced transformative innovations aimed at improving the delivery of healthcare. However, the successful adoption of new health technologies remains a challenge, often due to ineffective communication, stakeholder misalignment, and resistance to change. This doctoral research was initiated following the unsuccessful implementation of a telemedicine project at the County Clinical Emergency Hospital of Cluj-Napoca between 2019 and 2021. Despite being a technically sound solution with endorsement from hospital management, the project failed to achieve widespread adoption.

The experience prompted a reflection on the need for a deeper understanding of how innovation is communicated within healthcare systems and how communication strategies can facilitate adoption.

Across the world, COVID-19 pandemic served as a catalyst for healthcare innovation, from vaccine development to remote patient monitoring. The pandemic, however, exposed systemic barriers to innovation adoption, from regulatory constraints and healthcare workforce resistance to a lack of trust in digital solutions.

This research investigates the mechanisms through which innovation is introduced, communicated, and integrated into healthcare ecosystems. Specifically, it research aims to gather and synthesise expert opinions on the most effective strategies and best practices for communicating innovation in healthcare. It seeks to analyse and compare the communication strategies employed by various stakeholders, including healthcare providers, patient organisations, medical technology companies, pharmaceutical companies, and regulatory bodies, to understand how healthcare innovation is framed and disseminated. Additionally, it aims to assess the impact of these communication strategies on patient perceptions, understanding, and adoption of healthcare innovations, identifying factors that influence trust, engagement, and acceptance of innovation.

The communication of innovation in healthcare is analysed through multiple theoretical lenses, positioning it at the intersection of communication theory, healthcare innovation, and organisational change. By drawing upon a multidisciplinary theoretical framework, this study integrates perspectives from communication models and theory, technology diffusion and uptake models, and change management theories.

Employing a mixed-methods approach, the research integrates semi-structured interviews, content analysis using a custom built web scraper, and an online survey to assess communication strategies used by various healthcare stakeholders. The results reveal significant discrepancies in how different stakeholder groups frame and communicate healthcare innovation.

In response to these findings, the study proposes a prototype communication model designed to enhance the dissemination and adoption of healthcare innovations. As such, the research addresses the communication gaps identified but also extends beyond theoretical analysis to provide actionable recommendations, increasing the study's real-world applicability.

## Chapter 1: Introduction

The first chapter provides the general framework of the doctoral research, presenting the central theme and the motivation for selecting this topic, in the context of current threats to public health and the proliferation of medical technologies. This section positions the study within contemporary academic discourse and societal trends. The introductory chapter also outlines the research objectives the thesis aims to achieve, thus guiding the investigation towards a clear and applied direction.

The main research objectives are:

1. To evaluate and synthesise expert opinions on recommended strategies and best practices for effectively communicating innovation in the healthcare field.
2. To analyse and compare the communication strategies used by different actors involved in shaping the narrative around healthcare innovation.
3. To assess the impact of communication strategies on how patients understand, perceive, and adopt healthcare innovation.

The methodology of the thesis adopts a mixed-methods approach, integrating both qualitative and quantitative methods to obtain a nuanced understanding of how healthcare innovation is communicated. In the first stage, semi-structured interviews were conducted with experts in healthcare, communication, and innovation, to capture their perspectives on effective communication strategies. In parallel, a web scraper tool was used to collect and analyse over 6,000 entries from websites belonging to nine categories of stakeholders involved in healthcare innovation, such as hospitals, patient organisations, medical startups, and international

institutions. This content analysis allowed for the identification of dominant digital narratives and differences in approach among stakeholders. Additionally, an online survey was conducted with patients and users of digital health services, aiming to assess the impact of communication on their perception, trust, and willingness to adopt innovation. The combination of these methods enabled data triangulation and the formulation of robust conclusions anchored both in the institutional realities of stakeholders and the direct experiences of the final beneficiaries of innovation – the patients.

## Chapter 2: Theoretical Framework

The second chapter builds the theoretical foundation of the research and defines the key concepts that guide the analysis: innovation, organisational change, strategic communication, and digitalisation in healthcare (including digital health, e-Health, and telemedicine). These concepts are examined from an interdisciplinary perspective to understand how they interact in the context of healthcare innovation.

The chapter explores organisational change models, focusing on theories such as Kotter's eight-step model, ADKAR, and the concept of sensemaking, explaining how these frameworks can be applied to facilitate and communicate change in hospitals and other healthcare organisations. The chapter underlines the specific complexities of the healthcare sector, marked by resistance to change, rigid hierarchies, and challenges in staff engagement.

A central element is the introduction of the concept of “polyphonic innovation”, which highlights that innovation narratives are constructed and communicated differently by various involved actors, each with distinct interests, languages, and priorities. The chapter explores how these multiple voices shape both public and institutional perceptions of innovation.

It also examines the Romanian medical system, referring to the National Innovation Strategy, the level of digitalisation, and preparedness for technological transformation, alongside a brief overview of relevant European legislative frameworks concerning digital health and innovation.

Finally, the chapter reviews key communication models, diffusion of innovation theories (such as Rogers' model), and technology adoption frameworks (such as TAM and UTAUT), all adapted to the specific context of healthcare. The contributions of disciplines such as public

relations, social marketing, and advertising are also highlighted in shaping communication strategies based on trust, clarity, and stakeholder engagement.

## Chapter 3: Empirical Research and Findings

The third chapter presents the applied component of the research, combining the methods used and the results obtained through an empirical approach structured into three directions: semi-structured interviews, web scraping data analysis, and a patient survey.

This section analyses the responses collected from interviews with experts in healthcare, communication, management, and innovation. The interviews enabled the identification of key themes such as:

- perceptions of innovation in healthcare;
- communication barriers (e.g., lack of strategy, insufficient staff involvement, technical language);
- the need for co-creation and early involvement of all stakeholders;
- the importance of clarity and transparency in the process of introducing new technologies.

The second section presents the results of a custom-built web scraper that collected and analysed 6,237 unique links from websites of nine stakeholder categories: Romanian and international hospitals, patient organisations, medical startups, health communication agencies, pharmaceutical companies, medical devices companies, think tanks, and international regulatory bodies.

The digital corpus analysis revealed:

- a wide variety of innovation narratives, but often fragmented;
- significant differences in tone and purpose (e.g., informative vs. promotional);
- lack of a unified strategic approach in online innovation communication;
- underrepresentation of the patient perspective in innovation-related discourse.

The third section synthesises the data from an online survey with 170 respondents, mostly patients or users of digital health services. The survey explored:

- the level of trust in health innovations;
- how communication influences risk-benefit perception;
- the willingness to adopt new technologies (e.g., mobile apps, telemedicine);
- preferred sources of information (e.g., doctors, official websites, social media).

The chapter concludes with a comparative synthesis of the three data sets, highlighting convergences and discrepancies between what institutional actors communicate, what patients perceive, and what is expressed in the digital sphere. These results offer a strong basis for developing a practical model of strategic communication in healthcare, to be introduced in the next chapter.

## Chapter 4: Towards a Prototype for Innovation Communication

The final chapter concludes the study with a critical reflection on how well the initial objectives were met and the extent to which the empirical findings validated the research assumptions. Rather than offering a purely theoretical synthesis, this chapter proposes a prototype model for communicating innovation in healthcare.

It revisits the main findings from the three research stages (interviews, web scraping, survey), analysing whether the initial hypotheses were confirmed or disproved. Emphasis is placed on the importance of clear communication, early stakeholder involvement, and building trust throughout the innovation process.

The chapter also analyses the failure of the telemedicine initiative implemented at the County Clinical Emergency Hospital in Cluj-Napoca, viewed through the lens of the study's findings. Although the technology was available and its potential evident, the absence of a communication strategy, insufficient staff training, lack of clear regulations, and poor communication with patients led to low uptake.

At the core of this chapter lies the proposed prototype model for strategic innovation communication, built on the empirical conclusions. The model offers:

- a stakeholder mapping framework;

- a process for identifying communication barriers and sensitive points;
- recommendations on communication channels, message framing, and tone;
- mechanisms for feedback, adaptability, and impact monitoring.

This model is designed as a flexible tool that can be applied across various organisational contexts, from public hospitals to medical startups, in order to increase acceptance and effectiveness of technological or organisational innovations.