

## THE IMPORTANCE OF THE RESILIENCE OF HEALTH INSTITUTIONS IN THE EVOLUTION OF HEALTH SERVICES IN ROMANIA

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### **Abstract**

*Medical problems and economic crises that have hindered the evolution of society are as much a part of human civilization as the efforts to eradicate them. Problems related to public healthcare and efforts to support it represent a global challenge that has evolved over time from population health surveillance to epidemic eradication, then to the identification of health needs, to the development of health promotion strategies and, finally, to the status of evaluating and maintaining health services in the face of challenges. 21st century Romania is faced with underfinancing of the health system, poor access to medical services, a hospital network often not in line with the requirements of scientific progress and insufficient education in terms of medical information and prevention, although the theoretical concern to analyse the health system and its efficiency exists, as demonstrated by the multitude of reports and studies conducted by researchers in the field. The present study approaches the interdisciplinary theme of health system resilience, presenting the process of establishing the health system with its economic, social, and medical implications, in order to show an overview of the evolution of the Romanian medical system. Romanian healthcare and population insurance against medical, economic and social risks is a permanent concern of both decision-makers and the population. This article aims to examine the events that formed the basis of the establishment of health services in Romania, respectively their evolution, in order to show that through a strategic and integrated approach, health institutions can become more efficient, accessible and prepared for the future. This research also aims to highlight the importance of the resilience of health institutions to ensure the continuity and efficiency of health services, especially in the context of crises such as pandemics or economic difficulties. A resilient health system has the capacity to adapt to changes and maintain its functionality for the benefit of the population.*

**Keywords:** *resilience; healthcare; financing; sustainability; health insurance.*

**JEL classification:** B15; H10; I18; O1.

### **1. INTRODUCTION**

Over the past decades, health systems globally have been subject to major challenges, generated by health crises, economic pressures, demographic changes

and the continuous need to adapt to technological innovations. Pandemics, such as the 1918 Spanish influenza or, more recently, the 1918 Influenza Pandemic Covid-19, have highlighted the need for increased responsiveness and adaptability of health institutions and the importance of a strong organizational framework to ensure continuity of health services in situations of uncertainty and systemic stress. In this context, health system resilience has become an increasingly used field of study, especially after the 2014 Ebola pandemic in West Africa and the Covid-19 pandemic, the World Health Organization (WHO) is asking national governments to increase the resilience of their health systems. At the same time, economic crises such as the 2008 crisis or accelerated inflation in various regions have reduced people's access to health services. The scale and complexity of the events facing health systems differ according to context, covering a multitude of situations, from national crises to everyday challenges. As hospitals are complex facilities providing vital health services, their resilience is important in mitigating the societal repercussions of disasters. However, in Romania, organizational resilience remains an under-explored concept.

The resilience of hospital facilities has become a preoccupation of the modern world, representing a complex process comprising a series of activities influenced by managers' decisions and the impact of their actions on the course of activities as well as on the results in the event of a crisis. It is well known that managerial decisions are reflected in the functioning of hospital facilities and thus in the health status of the population, which is essential for economic well-being and is considered a factor supporting socio-economic development. The concern of managers to provide high performance health services and the rapid increase in expenditure in this sector, together with the growing number of requests from patients, have heightened the need to identify all the factors influencing these aspects.

## **2. LITERATURE REVIEW**

In 1973, Holling introduced the concept of resilience in the context of ecological systems, demonstrating how these systems can absorb and adapt to unpredictable disturbances (Holling, 1973). His theory was extended by (Levin, 1998) and (Walker and Salt, 2006) to the field of complex systems, including economics, politics and organizations. According to them, resilience is the capacity of systems to respond effectively to crises and change, emphasizing the importance of adaptability in the face of disturbances.

In 2007, McManus et al. provided a framework for assessing organizational resilience, based on research in ten New Zealand organizations. Their study showed that resilience depends not only on formal crisis response plans, but also on factors such as situational awareness and the ability to manage critical vulnerabilities. (Beer, 2009) contributed to our understanding of organizational

resilience by exploring how authentic leadership and an open organizational culture can help organizations adapt and perform in unpredictable environments.

Britt *et al.* (2012) proposed a framework for building resilience at the individual and community levels, particularly in the context of natural disasters. It emphasizes that resilience is not a fixed trait, but a capacity that can be strengthened through planned interventions and collaboration between different social actors.

More recent studies, Liu and Zhao (2015), have investigated the resilience of hospital networks, proposing collaborative planning models to optimize the use of resources in crisis situations. They demonstrated that increasing cohesion and collaboration among healthcare facilities can significantly improve the response to high demands during crises. We also mention the studies developed by Xiao and Cao (2017), Petrie *et al.* (2018), Patterson and Clark (2020). Tengblad and Oudhuis (2020) propose a comprehensive theoretical framework for understanding and developing organizational resilience at the EURAM 2019 Conference in Lisbon.

In 2017, the WHO declared resilience as an essential pillar of public health, emphasizing the need for health systems to be able to respond and adapt rapidly in the face of crises, a point also addressed by Arsenault *et al.* (2022). In this context, studies conducted in France and Spain during the COVID-19 pandemic emphasized the importance of a robust infrastructure and agile management to maintain health system functionality (Gonzalez *et al.*, 2020).

To emphasize the importance of the term, in 2021, the World Health Organization (WHO) adopted the term 'resilience' with reference to health, targeting sustainable development goals, in 'Health and well-being and the 2030 Agenda for Sustainable Development in the WHO European Region: an analysis of policy development and implementation' (WHO, 2021). Other research on health system resilience includes: Arsenault *et al.* (2022), Catussi Paschoalotto *et al.* (2023), Luke *et al.* (2023), Zhao *et al.* (2023), Al Asfoor *et al.* (2024), Zhong *et al.* (2024). Over time, the aim of researchers has been to translate health system resilience into an indicator that could be easily assessed: 'resilience research is the shift from purely conceptual thinking to looking for operational ways and means to build resilience' (WHO, 2017).

### 3. THE EVOLUTION OF THE HEALTH SERVICES IN ROMANIA

The evolution of health services in Romania is a complex subject, reflecting the country's economic, political and social transformations, influencing both access to and quality of health care. From the inter-war period to the present day, the Romanian health system has gone through numerous changes, starting with a centralized health system, up to the integration into the European Union and the implementation of fundamental reforms.

From the 17th century onwards, the first forms of public hospital appeared. The term "hospital" is attested in 1646 (Ionescu and Romanescu, 1970), and in 1704 the first modern hospital was established in Bucharest (Besciu, 2011). In parallel with the Church's efforts, timid attempts to organize a state medical system appeared, especially in the second half of the 18th century. Thus, pre-modern hospitals in the Romanian countries evolved from the charitable initiatives of the Church and the rulers towards institutionalized forms of care, inspired by Western European models (Chirita, 1997).

Modern hospitals were established in Romania, such as the Filantropia Hospital in Bucharest (1813), the first modern civil hospital. Other important institutions followed: the Grigore Alexandrescu Hospital (1886), the Rescue Society (1906) and the Central Military Hospital (1859) (National Archives Central National Historical Archives Service Administrative and Cultural Archives Office).

During the inter-war period, Romania enjoyed a relatively well-organized health system compared to other Eastern European countries (Reianu, 2020). During this period, regional and national hospitals were established and the health infrastructure was beginning to develop more rapidly. However, health services were accessible only to a small part of the population, mostly to those with higher incomes (Bucur-Deckard, 2002). After World War II, during the communist period, health services were nationalized and centralized, with the state taking full control of the health sector. The aim was to provide free access to health services for all citizens, but unfortunately this also resulted in a low efficiency of the system due to excessive bureaucratization and poor allocation of resources (Carroll, 2002).

After 1989, following the fall of the communist regime, Romania began a process of transition towards a more modern healthcare system closer to international standards (Pusca, 2018). During this period, the first major reforms were implemented, which aimed at opening the healthcare system to more Western practices and privatizing some services (Barna, 2014). However, the transition was marked by economic and social instability, which led to funding shortages and an underdeveloped healthcare infrastructure (Cace *et al.*, 2010).

After joining the European Union in 2007, Romania started to adopt clearer health policies, aiming to improve access to health services and introduce a more functional health insurance system (Abrán *et al.*, 2016). Thus, new forms of hospital management were implemented and reforms were introduced in the social health insurance system, leading to the consolidation of a health system based on a public-private mix. During this period, measures were introduced to modernize hospital infrastructure, but financial challenges and the lack of clear human resource management policies prevented a significant improvement in health services (Vlădescu *et al.*, 2016).

The year 2010 marked a period of economic austerity, which directly affected the health system (Owen, 1991). The reduction of public funds allocated to hospitals and the lack of investment in health infrastructure led to successive crises in hospitals, and health professionals were under major pressure (Rechel and McKee, 2009). In Romania, these issues led to an increase in the migration of doctors and medical staff to other countries. However, during this period significant progress has also been implemented, such as the partial digitization of the health system (electronic patient records, online appointments, etc.) and improved access to certain innovative treatments, thanks to EU support.

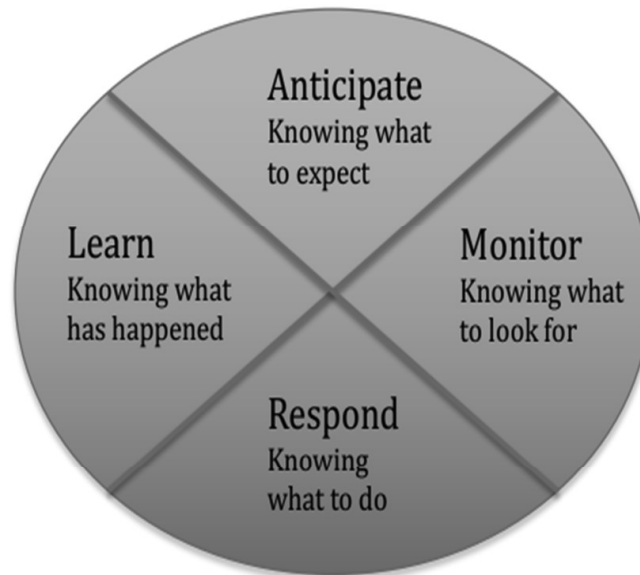
#### **4. THE RESILIENCE OF HEALTH INSTITUTIONS**

In an economic context marked by rising health care costs, an ageing population and the challenges posed by health and economic crises, strengthening the resilience of health facilities becomes a strategic priority for every state (Frenk and Knaul, 2002). Existing literature suggests that the resilience of a health system is influenced by several factors that include: (1) Financial and human resources: various studies have emphasized the importance of investments in hospital infrastructure and continuous staff training to enable institutions to respond quickly and effectively to health crises (Murray *et al.*, 2017). (2) The resilience of health organizations: organizations with a flexible structure that enables rapid reactions and well-informed decisions in the face of sudden changes demonstrate superior resilience (Lyng *et al.*, 2021). (3) Technology and innovation: digitalization and adoption of advanced technologies play a crucial role in developing a rapid and effective response to crises (Baker *et al.*, 2021). (4) Coordination and collaboration between institutions: collaboration between hospitals, government authorities, international organizations and NGOs is essential in ensuring a coherent and effective crisis response (Krasnopevtseva *et al.*, 2025).

According to Hollnagel *et al.* (2011) on (1) monitoring, (2) anticipating, (3) responding, and (4) learning abilities. If an organization has these skills, it is much better equipped to analyze and solve problems in a structured and practical way, and even more importantly it has the ability to learn from experience and improve the functioning of the system itself (Figure 1).

According to the literature (Achour and Price, 2010; Biddle *et al.*, 2020; Luke *et al.*, 2023), a resilient health system needs a (1) robust, modernized and adaptable infrastructure. In Romania, many hospitals operate in old buildings that are not up to current safety and efficiency standards. Investments in the renovation and expansion of health facilities, in modern medical equipment and efficient supply networks must become a constant for the proper functioning of the health sector. (2) Digitalization is, according to Iyamu *et al.* (2021) and Zheliuk *et al.* (2024), also a key resource for the efficiency, transparency and continuity of health services. An integrated information system that enables rapid access to

patient health data, resource management and communication between institutions can reduce response time and administrative errors. An important step was taken during the pandemic with the introduction of platforms for vaccination and reporting, but there is a need to scale up this process. Telemedicine, electronic health records and clinical management applications are indispensable tools for a resilient system, especially in remote or overstretched areas. (3) The health workforce is an important resource of any organization and health system.



Source: adapted from Hollnagel *et al.* (2011)

**Figure 1. Four dimensions of the resilient organization**

Thus, according to the literature (Forsgren *et al.*, 2022; Sheikhrabari *et al.*, 2022), the medical workforce is undesired to be well trained, motivated and protected. Romania is facing an acute human resource crisis, exacerbated by the exodus of medical professionals abroad. Continuing training, modern specializations, career opportunities and decent working conditions are key elements to build a resilient healthcare workforce. It also requires a human resource management system that anticipates long-term needs and balances between urban centers and deprived areas.

Institutional resilience depends on how the health system is governed (Debie *et al.*, 2024). Reforming administrative structures, reducing bureaucracy, clarifying responsibilities and evidence-based decision making can bring a qualitative leap in responsiveness. An effectively governed system is transparent, accountable and open to collaboration with civil society, academia and the private sector. In addition, it is essential to build trust between decision-makers, health professionals and the population, a decisive factor in any health crisis.

## **5. RESILIENCE OF HEALTH INSTITUTIONS IN THE CONTEXT OF THE COVID19 PANDEMIC IN ROMANIA**

The Covid-19 pandemic has challenged all health systems worldwide, highlighting the weaknesses and strengths of health institutions (Barabadi *et al.*, 2020). In Romania, the pandemic has highlighted the acute need for reform, investment and effective coordination in the health system. At the same time, it has demonstrated the importance of institutional resilience, the ability to respond quickly, adapt and maintain its essential functions in the face of unprecedented challenges. Moreover, the literature (Patterson and Clark, 2020; Arsenault *et al.*, 2022; Catussi Paschoalotto *et al.*, 2023; Dagenais *et al.*, 2023; Ridde *et al.*, 2023; Zhao *et al.*, 2023) shows that several health systems have faced difficulties in the fight against Covid-19.

Resilience is not reduced to the ability of hospitals to treat patients, but involves a set of factors: adequate infrastructure, well-trained staff, effective leadership, equipment stocks, coherent communication and, last but not least, public trust (Wang *et al.*, 2020). In Romania, the beginning of the pandemic caught the health system by surprise with underfunded hospitals, insufficient medical staff and poor institutional organization. However, some hospitals were rapidly reorganized into Covid-19 units, emergency procurement was activated, and digitization of the reporting system made rapid progress. Another key issue was the mobilization of human resources, as medical staff worked under unprecedented conditions of exhaustion and risk. However, the lack of a pandemic preparedness plan and clear protocols led to chaos in the first months. Public communication was often inconsistent, fueling public distrust and resistance to protective measures or vaccination. Inequalities between regions and inequitable access to services also exposed a chronic problem in the Romanian health system: the significant urban-rural divide.

The Covid-19 pandemic has shown that a resilient health system is not built in times of emergency, but through strategic investment and long-term vision. To build real resilience in the future, Romania needs clear public policies focused on prevention, sustainable financing, digitalization and continuous training of health professionals. Primary and community healthcare networks need to be strengthened so that hospitals do not remain the only "front line" in the face of crises. Moreover, health system reform must be oriented towards transparency, equity and institutional accountability. The Covid-19 pandemic was a turning point in the evolution of health services in Romania. The health system was subjected to unprecedented challenges and the shortcomings of infrastructure and human resources became evident. However, the pandemic accelerated the digitization of services and brought to the forefront the urgent need for investment in hospitals, medical staff and public health systems. Many hospitals were modernized to cope with the health crisis and medical education was rapidly adapted to the new pandemic conditions.

The resilience of a health institution requires: (1) A capacity to respond rapidly to health emergencies. (2) Adaptability to external pressures (epidemics, staff migration, economic crises). (3) Continuity of essential services in situations of systemic stress. (4) Public trust and transparency in communication. (5) Competent leaders and clear decision-making systems.

Directions to strengthen resilience: (1) Strategic investments in infrastructure, modern regional hospitals, equipped emergency centers, efficient medical circuits. (2) Staff training and retention, incentives to stay in the public system and in disadvantaged areas. (3) Management reform, professionalization of hospital leadership and depoliticization of decisions. (4) Increased digitalization, interoperability between databases, telemedicine, automated decision algorithms. (5) Continuity and crisis response plans, simulated, tested and constantly updated. (6) Partnerships with private sector and NGOs, effective collaborations in crisis situations.

## 6. CONCLUSIONS

The impact of the medical and economic crises has highlighted the structural limitations of the Romanian healthcare system and the urgent need for transformation. Without resilient institutions capable of operating coherently and efficiently in the face of pressures, any progress cannot be sustainable. Thus, strengthening the responsiveness and resilience of the health system must no longer be seen as a secondary objective, but as a national priority.

The resilience of health institutions is a necessity in a world of instability, rapid change and recurrent crises. The effects of the Covid-19 pandemic are still being felt across the globe, revealing stark realities about health systems and the links between health and the global economy. Recent years have shown that healthcare is not just a sector in its own right, but part of the whole economy. As trade, industry and services have been paralyzed, the pandemic has shown that the economic health of a nation is as vital as the health of its citizens.

Over time, Romanian society has been deeply affected by the overlap between medical problems and economic crises, which have slowed down socio-economic development and exposed the fragility of public institutions. The economic crisis of 2008-2010 had a severe impact on the healthcare system, leading to budget cuts, hiring freezes and mass migration of medical staff to other EU countries. These imbalances left deep scars in the responsiveness of health institutions. The Covid-19 pandemic, which occurred in a context already marked by underfunding and inequity, highlighted the lack of emergency preparedness: overcrowded hospitals, insufficient equipment, poor coordination and a population with low confidence in the system. However, some institutions have managed to adapt their work rapidly, demonstrating forms of institutional resilience. Health institutions in Romania have demonstrated a basic resilience in the face of crises, but remain structurally deeply vulnerable. Strengthening them



cannot be achieved through isolated interventions, but through a coherent and integrated strategy, with a focus on investment, professionalism and transparency. Building resilient health institutions, able to function effectively in times of crisis as well as in times of stability, is essential to prevent the recurrence of these difficulties in the future. Such resilience is not only about emergency response, but also about strategic planning, sustainable investment, human resource preparedness and trust in healthcare.

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