

**Review****VIEW ON HEALTH CARE SYSTEM OF THE REPUBLIC OF SERBIA****Slavica Anđelić<sup>1</sup>, Vojin I. Vidanović<sup>1</sup>, Olivera Milutinović<sup>2</sup>**<sup>1</sup>Medika College of Vocational Studies in Healthcare, Belgrade, Serbia<sup>2</sup> Faculty of Management, Sremski Karlovci, Serbia**Received:** 21 December 2023; **Revised:** 12 May 2024; **Accepted:** 14 May 2024**Published:** 14 May 2024**DOI:** 10.5937/annnur2-48346**Abstract**

From the viewpoint of theoretical health care system management description, it is significant to identify and evaluate the effects of organization, financing, and rationalization within the healthcare system of the Republic of Serbia. In practical application, this pertains to the strategic decision-making process for improving functions and implementing necessary changes within the system. It also relates to healthcare human resources, as well as ensuring proper client satisfaction and education. The healthcare system possesses characteristics that set it apart from other areas. Given the globalization of the market and the increasing societal needs, it's imperative for the healthcare system to be organized in a manner that fulfills all patient demands and guarantees their satisfaction. User satisfaction is ensured by achieving the highest possible quality in disease diagnosis, treatment, and patient care at reasonable prices, while minimizing the risk of errors and adverse effects on patients.

**Keywords:** healthcare system, health insurance, Serbia**Corresponding Author:** Vojin I. Vidanović, e-mail: vojinvidanovic@gmail.com

## Introduction

The globalization of the market and the increasing societal needs compel every organization, including healthcare institutions, to structure itself to meet all client demands and ensure their satisfaction. While healthcare institutions aren't strictly "business" entities, they possess their own organizational structures, which inevitably entail certain business activities. The existence of an organizational structure implies that it can be modeled, allowing for the modeling of the organization itself.

In the case of "non-business" organizations not driven by profit, the purpose of modeling their organizational structure becomes more challenging to quantify. Nonetheless, the primary aim of organizational structure modeling remains optimization, which extends to understanding business activities and facilitating communication within the organization.

However, a question arises about the necessity of optimization when the organization's primary goal isn't profit generation<sup>1</sup>. Despite this, numerous management theorists argue that management knowledge and skills are universal, applicable across all business processes.

Health insurance in the Republic of Serbia operates under a mandatory health insurance system, a model commonly found across European countries, particularly those with a socialist history. The introduction of the new Law on Health Insurance in 2005 marked a shift from solely mandatory social health insurance.

During the societal and healthcare crises of the late 20th century, private medical practices emerged as a response to the

challenges faced. The scarcity of healthcare financing sources, coupled with the rise of private practice, underscored the need for private health insurance. This led to the introduction of private health insurance on the Serbian insurance market toward the end of 2003 and the beginning of 2004<sup>2</sup>.

The financing of the healthcare system in the Republic of Serbia involves a combination of public finances and private funds. The primary source of funding is the Republic Health Insurance Institute, which collects funds directly from employed employers into its sub-account. This sub-account is accessible to the Ministry of Finance.

In addition to contributions from the Republic Health Insurance Institute, the healthcare system receives financing from various budgetary sources. These include funds from the Pension Fund, allocations from the Ministry of Finance for the unemployed, and other supplementary sources<sup>3</sup>.

The recommendation is to provide insight into possible future steps in the development of the healthcare system of the Republic of Serbia to increase efficiency and achieve and preserve financial sustainability in the long term. The goal is to ensure: a long-term financially sustainable health care system; improving the efficiency and quality of the overall health system; continuous and equally accessible health care.

## *Organization of the Health Care System*

The World Health Organization (WHO) resolution, within the global strategy 'Health for All by the Year 2000,' outlined guidelines for international action<sup>4</sup>. It called upon the

international community and WHO member countries to review the foundations of health policy and establish healthcare implementation at three levels:

1. Primary,
2. Intermediate or secondary
3. Central or tertiary<sup>5</sup>

All three levels are functionally interconnected within a unified system, wherein:

1. Higher levels provide support to lower ones.
2. Ensuring unhindered passage according to needs.
3. Maintaining unique medical documentation.
4. Informing lower levels about treatment<sup>6</sup>.

The primary level of healthcare serves as the fundamental and central component of the healthcare system, addressing at least two-thirds of health needs. It is primarily administered in Health Centers and institutes for healthcare and public health<sup>7</sup>.

These institutions, including Health Centers, pharmacies, student polyclinics, etc., allow citizens to seek medical attention without requiring a referral letter. Among these, the Health Center stands out as the most crucial institution at the primary level<sup>7</sup>.

The secondary level of healthcare, facilitated by general and specialized hospitals, aims to address complex health problems using specialized personnel and advanced medical technology. When a Health Center is unable to provide specialized care, patients are referred to the secondary level, typically a hospital. In Serbia, there are 77 hospitals where each patient receives the necessary

healthcare, whether it be outpatient or inpatient treatment<sup>9</sup>.

The tertiary level of healthcare is tasked with delivering advanced diagnostics and treatment through highly specialized personnel and cutting-edge technological equipment. It plays a pivotal role in providing professional assistance and support to the secondary level while also conducting medical education and scientific research activities. Healthcare services at the tertiary level are typically provided by clinics, institutes, clinical-hospital centers, and clinical centers<sup>7</sup>.

Tertiary-level institutions can only be established on university campuses with a faculty of health professions. Tertiary-level institutions without a general hospital at their headquarters must also provide secondary-level health services, i.e., general hospitals.

The implementation of healthcare for the population is directly facilitated through a network of health institutions, contingent upon the advancement of organizational structures and technological capabilities. The expansion of the network of health institutions and the adoption of modern technology necessitates a contemporary management system and an optimal organizational structure<sup>7</sup>.

Any organization whose activities can be broken down into operations, or a set of activities, can be modeled accordingly. Processes and operations are distinct concepts, with an operation potentially encompassing multiple processes. The activities of any organization, regardless of its nature, can be categorized into operations, and it's feasible to model processes within non-"business" organizations as well. All organizations engage in work, and the term 'business process' refers to the activities

carried out within the organization, rather than solely to the nature of the organization itself<sup>1</sup>.

In the case of organizations not primarily focused on generating profit, optimizing the organizational structure can serve to enhance the experience of system actors or increase the value of services delivered to users, such as patients in healthcare institutions. The quality of service in healthcare directly impacts individuals' health and carries a significant emotional component, given that most patients have supportive individuals in their social circles.

Optimizing the organizational structure in healthcare institutions can be viewed as a moral imperative, considering its direct impact on people's well-being. Therefore, it's evident that optimization holds importance in certain non-profit organizations as well<sup>1</sup>.

Let's assume we've opted to model the organizational structure of healthcare institutions to identify new and improved models that can enhance efficiency and potentially effectiveness in business activities. The tangible increase in efficiency can manifest in real-world scenarios.

While modeling the organizational structure is rarely undertaken in local healthcare institutions, introducing new perspectives into business inherently alters the activity model, regardless of whether decision-makers actively consider it<sup>1</sup>.

Behavioral principles are integrated into the progression of digital technologies, impacting teamwork and operational and managerial aspects such as planning, organization, leading, and controlling processes. As a result, new digital structures that significantly streamline the entire

organizational workflow are prominently involved in all processes.

Modeling the organizational structure is a crucial practice, especially for non-business organizations like healthcare institutions. Given the inefficiencies often observed in healthcare, organizing these institutions should prioritize benefiting the users of their services—individuals whose health, and sometimes lives, depend on this system. Establishing a framework for enhancing work processes within healthcare institutions is vital, and modeling the organizational structure serves as an invaluable tool in achieving this objective<sup>1</sup>.

Certain authors<sup>8</sup> advocate eight core competencies in managing global health efforts, which are closely aligned with health management competencies but include domains adaptable to varying resource conditions and care contexts. These competencies encompass:

1. Strategic Thinking: The ability to set goals and align resources to solve problems and achieve organizational objectives.
2. Human Resource Management: Involves recruitment, retention, education, training, compensation, employee relations, performance evaluation, and mentoring.
3. Financial Management: Includes budget analysis, financial accounting, and assessment of capital projects.
4. Operations Management: Encompasses patient registration and flow, medical records management, bed management, environmental services, infection prevention, nursing, supply chain management, pharmacy, laboratory/diagnostic management, patient referral,

discharge processes, and information technology.

5. **Performance Management and Accountability:** Involves logic models, process and result measurement, balanced scorecards, quality improvement, feedback mechanisms, and accountability systems.
6. **Management and Leadership:** Focuses on creating a stimulating environment, overseeing Board of Directors' activities, and developing organizational and corporate culture.
7. **Political Analysis and Dialogue:** Entails understanding the political and regulatory environment, crafting compromise policies, and conducting stakeholder analysis and advocacy.
8. **Community and Client Assessment and Engagement:** Encompasses epidemiology, research techniques, participatory community research, health education, marketing, consumer understanding, and customer service focus.

These competencies form a comprehensive framework for effective leadership and management in global health efforts.

Healthcare possesses distinctive characteristics that differentiate it from management in other fields. One notable aspect is the specialized knowledge required regarding health services and their respective value levels<sup>9</sup>.

### ***Health Insurance in the Republic of Serbia***

The health insurance system of the Republic of Serbia faces similar challenges to those encountered by healthcare systems in other countries, irrespective of their level of

development. Key issues include the costs associated with the population's age structure, the adoption of new technologies, and the level of population education. These factors necessitate reforms to the health insurance system. The primary goal of reforming the health insurance system is to reduce costs and align expenditures with the realistic capabilities of the Republic of Serbia's budget<sup>10</sup>.

The challenges include the rising demand for healthcare due to factors such as health culture, increased life expectancy, a growing elderly population, and unfavorable living and working conditions. In response, it becomes imperative to extend mandatory health insurance coverage to encompass as many citizens as possible<sup>3</sup>.

The Health Insurance Act of 2005, which governs the reform of the healthcare system, also addresses mandatory health insurance. Additionally, it provides for the option of voluntary health insurance, which is regulated by the Decree on Voluntary Health Insurance issued in 2008<sup>2</sup>.

The regulation intricately outlines the introduction, types, conditions, methods, and procedures for organizing and implementing voluntary health insurance. In the Republic of Serbia, voluntary health insurance can be organized through three main models: parallel, additional, and private. Parallel and additional health insurance are administered by both insurance companies and the Republic Health Insurance Fund (RHIF)<sup>11</sup>.

Parallel health insurance covers the expenses related to health services, medications, medical-technical aids, and other monetary benefits that are not included in the rights provided by compulsory health insurance. It offers insurance with a broader range of

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coverage, scope, and standard of benefits, including monetary benefits exceeding those covered by compulsory health insurance<sup>12</sup>.

Persons who are not covered by compulsory health insurance or who have not joined compulsory health insurance can opt for private health insurance to cover the costs for the type, content, scope and standard of rights that are contracted with the insurance provider<sup>12</sup>.

Voluntary health insurance in the Republic of Serbia is in its early stages of development. The premium for voluntary health insurance depends on several factors, including the selected program of health services, the method of contracting (individual, collective, or family insurance), contracted insurance sums, coverage width, supplementary coverages, compulsory participation in damages, and calculated discounts and surcharges<sup>12</sup>.

Voluntary health insurance for travel and stay abroad is widely adopted, often serving as a prerequisite for visa applications. However, the implementation of the Regulation on Voluntary Health Insurance in 2010 resulted in the reclassification of this insurance type, subsequently leading to a reduced share of the total premium<sup>2</sup>.

The regulation sets the conditions for the development of voluntary health insurance, as an additional form of mandatory health insurance. The goal is to provide better conditions for patients and additional sources of health care financing, i.e. to reduce or completely eliminate direct payment for performed health services. In the initial years of development, no special results are expected due to unresolved problems in the health system (defining the work of doctors, the issue of private practice, tax treatment of insurance premiums, economic opportunities

of the population, habits of the population and development of new products by insurance companies)<sup>2</sup>.

### *Financing of the Health System of the Republic of Serbia*

Funds for the health care of insured persons are provided by the RHIF while funds for uninsured citizens are provided from the Republic budget. Due to the lack of private health insurance, private funding comes from out-of-pocket payments, supplemented by a few large companies that have their own occupational disease treatment facilities and provide primary care services<sup>3</sup>.

The total funding for health insurance is derived directly or indirectly from citizens through multiple channels. These include financing from the state budget, mandatory health insurance contributions, direct payments "out of pocket" by individuals, funding from community funds, donations, loans, and other sources<sup>13</sup>.

A combined method of financing healthcare is employed, determining the collected funds, control systems, bearers of financial burden, and cost growth management. The financing model of the healthcare system is contingent upon factors such as the level of social and economic development, fiscal capacity, efficiency of fundraising, and policy feasibility<sup>13</sup>.

Mandatory health insurance in the Republic of Serbia operates under a social insurance model, compulsory for all and based on income levels, with contributions required from both employers and employees. Healthcare services are provided free of charge to patients at the point of care, and the level of protection is not dependent on the contributions paid<sup>13</sup>.

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The problem arises when employers who have financial difficulties do not pay the mandatory contributions to health insurance funds. There is a cycle of debt in which the funds do not make payments to hospitals, general practitioners and other service providers<sup>13</sup>.

Tax revenue is used to finance government activities. Thus, the health system has to compete for financial resources with all other programs and sectors financed by the Government<sup>13</sup>.

For private health insurance, citizens voluntarily decide whether to buy health insurance. The purchase of this type of insurance can be made on an individual or group basis. Private health insurance is based on competition, with the aim of improving efficiency. The private health sector is developed, but not incorporated into the national health system<sup>13</sup>.

Out-of-pocket financing” is a health insurance financing model that envisions individual patients paying the health care provider directly out of pocket for supplies and services they receive. These costs cannot be reimbursed by insurance. This method of financing reduces the unnecessary use of health services, but also raises additional funds<sup>13</sup>.

Financing by the local community is organized through the control of primary health care. This type of financing has limited capacity to collect a larger amount of money, but it is effectively used to achieve important results in primary health care in poor and underdeveloped countries<sup>13</sup>.

### ***Recommendations for Rationalization of Health Care System of the Republic of Serbia***

Implemented healthcare reforms in various economies aim to achieve three basic goals: expanding healthcare availability to more people and providing affordable health insurance for the uninsured, improving the quality of healthcare provided, and controlling the continually rising healthcare costs. By attaining these strategic goals, the industry can address the challenges it faces.

Healthcare organizations are adopting a range of strategies to overcome these challenges, including improving productivity, managing escalating healthcare costs to ensure financial sustainability, empowering consumers and addressing unmet healthcare needs, consolidating through mergers, acquisitions, or private-public partnerships to achieve economies of scale, enhancing efficiency in the supply chain, navigating regulatory challenges, strengthening Internet and IT strategies, and integrating digital support in healthcare<sup>14</sup>.

The healthcare system in the Republic of Serbia faces significant challenges in achieving long-term financial sustainability. There is a clear trend of overspending and major inefficiencies in the utilization of assets and supplies. Control functions are lacking, particularly in size and scope needed for the system to attain and uphold financial sustainability. Poor financial management, especially within public health institutions, is evident, with planning and budgeting of healthcare expenditures not aligning with the budget calendar and fiscal strategy. Inefficient collection of health insurance contributions further threatens the system's sustainability. Moreover, cost-effectiveness, patient options, value received, and effectiveness in terms of health outcomes are

not at satisfactory levels. Donations are monitored solely by value within the system, with minimal monitoring of donated equipment and its subsequent utilization<sup>14</sup>.

Directions for increasing the efficiency of the health system in the Republic of Serbia are:

- The involvement of the private sector in the healthcare system is currently minimal, and the potential benefits of greater participation from private health service providers have yet to be realized. The system lacks sufficient mechanisms to monitor these institutions or to integrate them effectively in the future.
- The private health sector in Serbia is still underdeveloped, particularly in comparison to public institutions, which predominantly provide services, especially at the secondary and tertiary levels of healthcare.
- While the public hospital sector is relatively robust, there is a significant need for modernization and improvement<sup>14</sup>.

Long waiting lists for certain services persist, and opportunities to utilize the private sector to address this issue are not fully optimized. Access to healthcare lacks sufficient regulation, and integration within the system across different levels of service provision is lacking. The system should be developed in a more patient-centric direction.

The imbalance between preventive and curative health services negatively impacts the financial sustainability of the entire healthcare system. The low rate of reimbursement for new innovative medicines compared to comparable EU countries is concerning. Patient information flow within the system is inadequate, with poor cooperation and data sharing between public

health institutions. There is a complete lack of collaboration and information exchange between private and public institutions. The implementation and utilization of information and communication technologies in health institutions, especially in the public sector, are at a low level. There is uneven quality of services provided between private and public health institutions.

The recommendations aim to provide insight into potential future steps in the development of the Serbian healthcare system, with the overarching goals of enhancing efficiency, ensuring financial sustainability, and improving service quality and accessibility for all participants. To achieve these goals, several strategies are proposed:

1. Implementation of the "Hospital Purchasing Mechanism - HPM" model, involving contracts with healthcare units responsible for service provision, to enhance financial sustainability.
2. Adoption of uniform financial reporting frameworks, establishment of SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals, and development of key performance indicators and risk management strategies to further support financial stability.
3. Encouraging greater involvement of private healthcare providers and fostering partnerships between them and the Republic Health Insurance Fund (RHIF) to reduce healthcare costs.
4. Development of a cost-sharing model wherein patients would bear the price difference between private healthcare institutions and the amount covered by the RHIF, promoting greater affordability and resource efficiency.



These recommendations collectively aim to drive systemic improvements in the Serbian healthcare landscape, fostering sustainability, quality, and accessibility for all stakeholders.

The healthcare system of Serbia should undergo a paradigm shift towards preventive medicine, offering patients the option to choose their preferred doctor from the private sector. By prioritizing quality preventive healthcare through increased screenings, effective chronic disease management, and lifestyle promotion, the system can realize significant cost savings in the medium and long term.

Simplification of procedures and fees for registering new innovative drugs is essential, as such therapies can substantially reduce overall healthcare costs. Furthermore, the development of an integrated information system is paramount, enabling real-time information exchange among all healthcare institutions, public and private, especially those with waiting lists, to facilitate optimal patient outcomes.

We recommend the creation of a software solution to streamline patient records, ensure data privacy, enhance work technology, reduce bureaucracy and logistics costs, and facilitate future integration of paperless data transfer technology. These measures collectively aim to modernize the healthcare system, improve patient care, and drive efficiency gains across the board<sup>14</sup>.

Centralizing healthcare at the state level is recommended as the preferred option given the current state of development. Coordination challenges and the risk of service duplication and associated costs are significant arguments against a decentralized healthcare system. Moreover, the observed exceptional growth potential of the health

insurance market presents a promising opportunity to bolster the financial sustainability of Serbia's healthcare system.

## Conclusions

The healthcare system of the Republic of Serbia boasts a well-established network of institutions with clearly defined roles and responsibilities. However, there is a pressing need to optimize the organizational structure to enhance the patient experience and elevate the quality of services provided to users. Anticipated changes in the modeling of institutional organizational structures aim primarily at achieving greater efficiency.

The healthcare system possesses distinctive features that set it apart from other sectors. With the globalization of markets and evolving societal needs, there is an imperative for healthcare systems to be structured to fulfill patient demands and ensure their contentment. User satisfaction hinges on delivering superior quality in disease diagnosis, treatment, and patient care, all at affordable prices and with minimal risk of errors or adverse effects.

Health insurance plays a crucial role in financing the healthcare system, with expectations for the development of supplementary and voluntary insurance sectors to enhance financing efficiency and service quality for patients. Although reform processes in this segment have been slowest with currently minimal results, significant changes are anticipated in the near future. Key directions for improvement include better billing regulation, increased participation of private insurance, and greater incorporation of the private sector to ensure more stable financing of the health sector.

The strategic goals of healthcare reform encompass expanding healthcare availability,

ensuring affordable health insurance, enhancing the quality of healthcare services, and controlling healthcare costs.

Expectations for more effective involvement of the private sector, particularly at the secondary and tertiary levels, underscore the need for healthcare modernization and reduction of waiting lists. Furthermore, expanding preventive services and optimizing the utilization of innovative drugs are imperative. Prioritizing digitalization and enhancing information flow among health institutions are critical. Innovative models for service procurement and cost-sharing are essential for balancing service quality.

### Ethical Approval

N/A

### Conflict of Interest

The authors declare no conflict of interest.

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